

DEPARTMENT OF THE ARMY

**Committee Staff Procurement Backup Book
FY 1998 / FY 1999 Budget Estimate**

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MISSILE PROCUREMENT, ARMY

APPROPRIATION LANGUAGE

For construction, procurement, production, modification, and modernization of missiles, equipment, including ordnance, ground handling equipment, spare parts, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; \$1,178,151,000 in fiscal year 1998 to remain available for obligation until September 30, 2000.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1997 BUDGET REQUEST
WITH THE FY 1997 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/99 BUDGET REQUEST
(In Millions of Dollars)

Appropriation Missile Procurement, Army	FY 1997		FY 1997		Increase or (Decrease)
	Requirements per FY1997 Budget	704	Requirements per FY1998/1999 Budget	944	
Activity 2 - Other Missiles					240
Activity 3 - Modification of Missiles		38		70	32
Activity 4 - Spares and Repair Parts		12		12	0
Activity 5 - Support Equipment and Facilities		12		12	0
Reimbursable Program		30		30	0
		796		1,068	272

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase resulted from congressional adjustments to Javelin (+34), Avenger (+59), MLRS Rocket (+17), MLRS Launcher (+67), ATACMS (+69), distribution of reductions for P.L. 104-208, SEC 8037 (-3), P.L. 104-208, SEC 8138 (-1).

Activity 3 - Modification of Missiles - The net increase resulted from congressional adjustment to Patriot Mod (+12), Stinger Mod (+20), distribution of reductions for P.L. 104-208, Sections 8138 and 8037 (-0.075).

Activity 4 - Spares and Repair Parts - A proportionate reduction was made for Sections 8138 and 8037 of P.L. 104-208 (-0.011).

Activity 5 - Support Equipment and Facilities - A proportionate reduction was made for Sections 8138 and 8037 of P.L. 104-208 (-0.011).

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1998 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation	FY 1997 Requirements FY 1998/99 Budget	FY 1998	
		Requirements FY 1998/1999 Budget	Increase or (Decrease)
Activity 2 - Other Missiles	944	1,062	118
Activity 3 - Modification of Missiles	70	98	28
Activity 4 - Spares and Repair Parts	12	11	(1)
Activity 5 - Support Equipment and Facilities	12	7	(5)
Reimbursable Program	30	180	150
	1,068	1,358	290

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: BMDO funding transfer for PAC 3 (+349) and increased ATACMS

Block IA buy (+23); completion of quantity buys for Avenger (-78), Hellfire II (-93), and MLRS

Rocket (-39) along with funding decrease to Javelin (-18), TOW (-12) and other program adjustments (-14).

Activity 3 - Modification of Missiles - The net increase results from: start of ITAS buy (+63), funding decrease in Stinger (-24),

Patriot (-3), MLRS (-4) Mods, and no funding for Dragon Mod (-3).

Activity 4 - Spares and Repair Parts - The net decrease results from minor funding adjustments to Initial Spares and Repair Parts (-1).

Activity 5 - Support Equipment and Facilities - The net decrease results from decrease to Air Defense Targets (-5).

Reimbursable Program - The net increase results from projected increase in Federal (+78) and FMS (+54) sales.

COMPARISON OF FY 1998 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1999 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation	FY 1998 Requirements FY 1998/99 Budget	FY 1999 Requirements FY 1998/1999 Budget	Increase or (Decrease)
Missile Procurement, Army			
Activity 2 - Other Missiles	1,062	1,417	355
Activity 3 - Modification of Missiles	98	96	(2)
Activity 4 - Spares and Repair Parts	11	21	10
Activity 5 - Support Equipment and Facilities	7	7	0
Reimbursable Program	180	164	(16)
	1,358	1,705	347

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: increased quantity buys for Patriot (+21), Longbow Hellfire (+64), Javelin (+184), and BAT (+15); start quantity buy for ER-MLRS (+16), ATACMS Block II (+61), and other adjustments (-6).

Activity 3 - Modification of Missiles - The net decrease results from adjustments to modification programs (-2).

Activity 4 - Spares and Repair Parts - The net increase results from an increase in Spares and Repair Parts for Javelin (+4), and MLRS Launcher (+6).

Reimbursable Program - The net decrease results from: increase in sale of Javelin to USMC (+42), no anticipated sale of MLRS Rocket/Launcher (-54) and minor adjustments associated with the sale of several other items (-4).

Index for MISSILE PROCUREMENT, ARMY

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DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)																								
				FY 96			FY 97			FY 98			FY 99															
				QTY	COST	(5)	QTY	COST	(7)	QTY	COST	(9)	QTY	COST	(11)	QTY	COST	(12)										
(1)	(2)	(3)	(4)																									
	SURFACE-TO-AIR MISSILE SYSTEM																											
1	PATRIOT SYSTEM SUMMARY (MYP) (C49100)																											
2	AVENGER SYSTEM SUMMARY (C14900)																											
	SUB-ACTIVITY TOTAL																											
	AIR-TO-SURFACE MISSILE SYSTEM																											
3	HELLFIRE SYS SUMMARY (C70000)																											
	SUB-ACTIVITY TOTAL																											
	ANTI-TANK/ASSAULT MISSILE SYSTEM																											
4	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)																											
5	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) ADVANCE PROCUREMENT (CY)																											
6	TOW 2 SYSTEM SUMMARY (C59300)																											
7	MLRS ROCKET (C65400)																											
8	MLRS LAUNCHER SYSTEMS (C66400)																											
9	ARMY TACTICAL MSL SYS (ATACMS) -SYS SUM (C98510) LESS: ADVANCE PROCUREMENT (PY)																											

Activity: 2. **OTHER MISSILES**

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EXHIBIT P-1
February 1997

Activity: 3. **MODIFICATIONS**

P-1 Page 3 of 5

DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 4. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS)										
				FY 96			FY 97			FY 98			FY 99	
				QTY	COST		QTY	COST		QTY	COST		QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)			
	SPARES AND REPAIR PARTS													
18	SPARES AND REPAIR PARTS (CA0250)				11,500		12,078		11,381		21,385			
					-----		-----		-----		-----			
	SUB-ACTIVITY TOTAL				11,500		12,078		11,381		21,385			
	ACTIVITY TOTAL				11,500		12,078		11,381		21,385			

Activity: 5. SUPPORT EQUIPMENT AND FACILITIES**

P-1 Page 5 of 5

PROCUREMENT PROGRAM-INSTALLATION SUMMARY

(TOA, Dollars in Millions)

<u>System/Modification</u>	<u>Prior Yrs</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>Total</u>
PATRIOT MODS	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8
TOW MODS	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3
MLRS MODS	204.2	6.4	2.2	2.2	2.3	2.6	2.6	2.5	225
TOTAL FOR MISSILE MOD	231.5	7.6	3.9	5.7	4.3	5.1	4.7	5.3	268.1

BUDGET ITEM JUSTIFICATION SHEET											DATE	February 1997	
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										PATRIOT SYSTEM SUMMARY (MYP) (C-49100)	
MISSILE PROCUREMENT / Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY		6475			52	68	180	212	220	240	228	7675	
COST (in millions)		9829.1	4.9	0.0	349.1	369.9	459.2	445.4	433.1	396.8		12087.5	
Initial Spares (in millions)		344.3										344.3	
Total (in millions)		9873.4	4.9		349.1	369.9	459.2	445.4	433.1	396.8		12431.8	
Unit Cost (in millions)		1.5			6.7	5.4	2.6	2.1	2.0	1.7		1.6	
<p>DESCRIPTION: PATRIOT is an advanced Surface-to-Air guided missile system with a high single shot kill probability capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by US Forces during the 90's and beyond. The system utilizes a multifunction Phased Array Radar, a digital computer controlling system functions, a guidance system combining command and homing (track-via-missile) features, and provides the operator the ability to control operations. PATRIOT totally replaced Nike Hercules and partially replaced HAWK. It has the advantage of reducing manpower and logistics costs associated with the replaced systems while providing improved high and medium altitude air defense. Deployment is to the field Army and the system is integrated with the U.S. Air Force in the overall air defense of the theater of operations</p> <p>The PATRIOT Advanced Capability (PAC)-3 program is a result of a series of integrated, phased system improvements in combination with the PAC-3 missile which utilizes hit-to-kill technology. Modification to the system, which includes radar enhancements, communication upgrades and increased command, control, and computer capability, will increase PATRIOT's effectivity, survivability, flexibility of defense design, footprint and detection of smaller low radar cross section targets.</p> <p>JUSTIFICATION: FY98-FY03 includes costs for PAC-3 missile and modifications to support equipment.</p> <p>Cooperative Agreements:</p> <p>U.S. Owned/FRG Manned - The Memorandum of Understanding for enhancing air defense for Central Europe dated 6 Dec 84, providing U.S. support to US owned/FRG Manned PATRIOT Fire Units.</p> <p>NATO Maintenance and Supply Agency (NAMSA) - DOD directed requirement to support the European and NATO deployed units (International agreement Germany, the Netherlands and the U.S. for common logistics support of PATRIOT).</p>													

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT / 2 / Other Missiles										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
P-1 ITEM NOMENCLATURE										PATRIOT
PRODUCTION CONTRACT		(2)								
PATRIOT MSL										
MULTIYEAR										
FY87	Raytheon Co Andover, MA	SS/FPM-5(1)*	MICOM	Mar-87	Jan-89	700	502000			
FY88	Raytheon Co Andover, MA	SS/FPM-5(2)*	MICOM	Nov-87	Jan-90	715	474000			
FY89	Raytheon Co Andover, MA	SS/FPM-5(3)*	MICOM	Nov-88	Sep-90	815	475000	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-5(4)*	MICOM	Nov-89	Aug-91	815	497000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jul-92	1100	522000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	83	717000	YES	NO	
FY92	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	97	714000	YES	NO	
PATRIOT GSE										
MULTIYEAR										
FY87	Raytheon Co Andover, MA	SS/FPM-3(1)*	MICOM	Mar-87	Jan-89	12	N/A			
FY88	Raytheon Co Andover, MA	SS/FPM-3(2)*	MICOM	Nov-87	Jan-90	12	N/A			
FY89	Raytheon Co Andover, MA	SS/FPM-3(3)*	MICOM	Nov-88	Jan-91	10	N/A	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-4(4)*	MICOM	Mar-90	Feb-92	10	N/A	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jan-93	10	N/A	YES	NO	
PAC-3 MISSILE										
FY 98	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-97	Apr-99	52	2204000	N/A		
FY 99	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-98	Apr-00	68	1947000	N/A		
REMARKS:										
(1) Raytheon Company contract includes Martin Marietta (Orlando, FL) as subcontractor for missiles.										
(2) Sole Source Procurement is necessary because only the development contractors possess the technical expertise necessary to perform the effort without duplication of time, funds and effort already expended.										
(3) Fire Unit cost contains one Radar, one Engagement Control Station, and eight Launchers. Missile unit cost does not contain warhead cost.										
* Contract contains economic price adjustment clause. No cost has been recouped to date.										

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								
MISSILE PROCUREMENT / Other Missiles		AVENGER SYSTEM SUMMARY (C14900)								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0	0	
COST (in millions)	30.5	71.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Description:
The AVENGER System is a lightweight, highly mobile/transportable surface-to-air missile/gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). It is operated by a two man crew for defense against helicopters and fixed wing aircraft at low altitude, day or night, and in clear or adverse weather. The system incorporates an operator's position with controls, displays, fire control electronics, and the Standard Vehicle Mounted Launcher (SVML). The SVML includes seeker coolant bottles and related hardware and it supports and launches multiple STINGER missiles. The SVML provides output signals that can be used to display to the gunner exactly where the STINGER is pointed. The driven sight reticule capability aids the gunner in severe background clutter and Electromagnetic Counter Measure (ECM) environments. The system operates with standard unmodified Basic STINGER, STINGER-POST or STINGER-RMP missile rounds. AVENGER fills the Line-of-Sight Rear (LOS-R) role in Forward Area Air Defense Systems (FAADS).

A five year multiyear procurement (MYP) contract for AVENGER began in FY91. In 1994, Congress agreed to a provision in the FY95 budget that would grant a one year extension, at no additional cost, for extending the delivery schedule of AVENGER multiyear procurement authority so the Marine Corps and other services could take advantage of the Army's contract and favorable pricing terms. FY 97 procures the remainder of the multi-year procurement (93 fire units) for the Army National Guard.

Justification:
AVENGER constitutes the Line-Of-Sight Rear (LOS-R) component of the Forward Area Air Defense System (FAADS), and it is the first FAADS element fielded.

Missiles Cost Analysis		A. APN / BUDGET ACTIVITY TITLE/NO		B. WEAPON		C. MANUFACTURER NAME		D. DATE	
		MISSILE PROCUREMENT / 2 / Other Missiles		AVENGER SYSTEM SUMMARY (C14900)		Various		February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99	
Cost Elements		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each
HARDWARE									
Drive Hardware									
Turrent Assembly Army									
Unapplied EOQ									
EOQ Diverted to USMC									
SubTotal Missile Hardware									
PROCUREMENT SUPPORT									
Contractor Engineering		2726							
Government Engineering		2020							
Project Management Administration		420							
TOTAL PROCUREMENT		5166							
Command & Launch Hardware									
Std Veh Mid Launcher (SMVL) Army									
Other GFE- Army only									
Other (HMMWV)									
SubTotal C&L Hardware									
Support Cost									
Peculiar Support Equipment		2115							
Institutional Conduct of Fire Trainers(ICOFT)		8190							
Force On Force Trainers (FOFT)		6785							
DMPE									
Fielding		6261							
Interim Contractor Spt (Machinegun)		2015							
Other (FDT)									
SubTotal Support Cost		25366							
Gross P-1 End Cost									
Less: Prior Year Adv Proc		30532							
Net P-1 Full Funding Cost		30532							
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares									
MODS									
MOD Spares		987							
TOTAL		31519							

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT / 2 / Other Missiles										
C. P-1 ITEM NOMENCLATURE										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV RECD	IF YES W/A
FY 97	Boeing Aerospace Huntsville, AL	SSM-7/FP	MICOM	Dec-96	Mar-97	*93	379	yes	no	
REMARKS: * No quantity shown in FYDP, however, Army plans to procure 93 fire units.										

Simulator and Training Device Justification										Date	February 1997
Appropriation / P-1 Line Item		Weapon System (if applicable)				Equipment Nomenclature				PE	
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES		AVENGER				TRAINING DEVICES				C15200	
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total		
Quantity (Each)											
Proc (\$000)	27626	6503							34129		
RDT&E (\$000)											
O&S (\$000)											

TRAINING SYSTEM DESCRIPTION:

Description:

The training devices being procured and supported for the AVENGER Air Defense Weapon System are essential to establish adequate and cost effective initial entry and sustainment training programs for the AVENGER operators and maintainers. The current initial entry training programs are seriously deficient in terms of training tasks and the cost to operate/sustain. Both operator and maintainer courses (Ft. Bliss-Operator and Redstone Arsenal-Maintainers) depend on actual AVENGER fire units to conduct training. This method of training was in place because there were no development funds for training devices in the baseline Non-Developmental Item (NDI) program. The use of actual AVENGER fire units requires a higher instructor-to-student ratio, limits the depth of training, and causes higher operating and support costs. The operators and maintainers leave the initial entry training courses with less than adequate training. The further development of critical skills and building-up proficiency in the collective environment is hampered, because there are no sustainment training devices in the field specifically designed for the AVENGER operators and maintainers.

Justification:

This training device program will put in place Institutional Conduct of Fire Trainers (ICOFT) at Ft. Bliss, Texas for operator and leadership training. The Force-On-Force Trainers (FOFT) will support the operator in a field environment for collective training.

NOTE: Training device funding in FY 95 for \$8.933 million was not utilized to procure training equipment. These funds were used for production support and total package fielding costs associated with fire units procured in FY 94.

Simulator and Training Device Justification (Page 2)												Date	February 1997
Appropriation / P-1 Line Item		Weapon System (if applicable)			IOC Date		Equipment Nomenclature			PE			
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES		AVENGER			3Q88		TRAINING DEVICES			C16200			
Training Device By Type	Site	Del. Date	Ready For Trng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999		
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
					Each	\$000	Each	\$000	Each	\$000	Each	\$000	
Captive Flight Trainers (CFT)	Unit Locations	End of FY94	NOW	1	749	12651							
ICOFT	Ft. Bliss, TX	FY97	FY97	299	3	8190	2	5500					
FOFT	NTC/RANGES	FY97	Jan-00		22	6785	8	1003					
Total						27626		6503					

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type				Weapon System (if applicable)									
Captive Flight Trainers (CFT)				AVENGER									
Description / Justification													
The Captive Flight Trainer is used to train the AVENGER operator to track and acquire targets. It is also used to train proficiency in the field and system check-out.													
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost		
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000	
HARDWARE COSTS													
Device (hardware)	749	12651									749	12651	
ECOs													
Nonrecurring													
GFE													
Other (Specify)													
SubTotal Hardware Costs	749	12651									749	12651	
SUPPORT COSTS													
Special SE													
Integrated Logistics Support													
Other (Specify)													
SubTotal Support Costs													
Software/Courseware													
TOTAL COSTS		12651										12651	

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type		Weapon System (if applicable)											
ICOFT		AVENGER											
Description / Justification													
The ICOFT is a six student training station device needed to more efficiently train initial entry AVENGER operators at Ft. Bliss, TX.													
Financial Plan	Prior Years			FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost		Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
	Each	\$000		Each	\$000	Each	\$000	Each	\$000	Each	\$000	Each	\$000
HARDWARE COSTS													
Device (hardware)	3	8096		2	5412							5	13508
ECOs													
Nonrecurring													
GFE		94			88								182
Program Mgmt													
SubTotal Hardware Costs	3	8190		2	5500							5	13690
SUPPORT COSTS													
Special SE													
Integrated Logistics Support													
Other (Specify)													
SubTotal Support Costs													
Software/Courseware													
TOTAL COSTS		8190			5500								13690

Simulator and Training Device Justification (Page 3)												
Training Device By Type		DATE		February 1997								
FOFT		Weapon System (if applicable)		AVENGER								
Description / Justification The AVENGER FOFT will be provided to the National Training Center (NTC) and instrumented ranges to enable the operators and leaders to train in a simulated combat environment.												
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000
HARDWARE COSTS												
Device (hardware)	22	5891	8	909							30	6800
ECOs		800										800
Nonrecurring												
GFE												
Program Mgmt		94		94								188
SubTotal Hardware Costs	22	6785	8	1003							30	7788
SUPPORT COSTS												
Special SE												
Integrated Logistics Support												
Other (Specify)												
SubTotal Support Costs												
Software/Courseware												
TOTAL COSTS		6785		1003								7788

BUDGET ITEM JUSTIFICATION SHEET													
APPROPRIATION / BUDGET ACTIVITY				DATE February 1997									
MISSILE PROCUREMENT / Other Missiles				P-1 ITEM NOMENCLATURE HELLFIRE SYS SUMMARY (C70000)									
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program		
QUANTITY	46590	1102	2805	1465	2000	2030	2020	2020	2060		62092		
COST (in millions)	1959.5	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4273.3		
Initial Spares (in millions)	7.5										7.5		
Total (in millions)	1967.0	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4280.8		
Unit Cost (in millions)	0.04	0.21	0.13	0.19	0.17	0.14	0.15	0.12	0.10		0.07		

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance; Longbow HELLFIRE uses a radio frequency guidance section and is a fire-and-forget missile. HELLFIRE is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of the HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, Laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops. Longbow HELLFIRE maximizes the ability of the AH-64D Longbow Apache Helicopter to operate in adverse weather, battlefield obscuration, and dramatically increases aircraft survivability. HELLFIRE II and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Longbow HELLFIRE began production in FY 95 with Long Lead Items and Initial Production Facilitation.

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON HELLFIRE SYS SUMMARY (C70000)			C. MANUFACTURER NAME HELLFIRE Sys Lim Liab Co/Longbow Lim Liab Co			D. DATE February 1997		
ID	CD	Missiles Cost Elements	FY 96		FY 97		FY 98		FY 99		UnitCost	Qty	UnitCost	Qty
			TotalCost	UnitCost	TotalCost	UnitCost	TotalCost	UnitCost	TotalCost	UnitCost				
			\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	Each	\$000	Each
Flyaway Costs														
		All-Up-Rounds	167327	1102	152	296604	2856	230024	1465	300505	157	2000	300505	2000
		Containers	4549	3454	1	2351	1800	2283	1465	3185	2	2000	3185	2000
		GFE Explosives	589			1766		1180		1646			1646	
		Engineering Services	6176			8610		7316		7495			7495	
		Engineering Change Orders	3339			4153		3651		5026			5026	
		Fielding	128			937		1303		1384			1384	
		Acceptance Testing	6287			4613		5442		5564			5564	
		Total Hardware	188395			319034		251199		324805				
		Engineering Support												
		Project Mgt Admin	6121			8828		8582		8711			8711	
		Production Engineering Support	10184			11379		8948		8523			8523	
		Total Engineering Support	16305			20207		17530		17234			17234	
		Non-Recurring												
		Disposal of Tooling/Test Equipment				1999				2277			2277	
		IPF	12309			4914		2459						
		Cost Reduction Program	18945			11100		7699						
		Rate Tooling/Test Equipment	31254			18013		10158		2277			2277	
		Total Non-Recurring												
		Total Flyaway	235954			357254		278887		344316				
		Peculiar Support Equipment												
		Environmental Protection Covers						800		1117			1117	
		Total Peculiar Support Equipment						800		1117			1117	
		Gross P-1 End Item Cost	235954			357254		279687		345433				
		Less PY Adv Proc												
		Net P-1 Full Funding	235954			357254		279687		345433				
		Plus CY Adv Procurement												
		Other Non P-1 Costs												
		Initial Spares												
		Mods												
		Total	235954			357254		279687		345433				

BUDGET ITEM JUSTIFICATION SHEET												DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										LASER HELLFIRE MSL (BASIC/HWHFII) (C70100)	
MISSILE PROCUREMENT / Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY		46590	750	1800								49140	
COST (in millions)		1889.1	50.7	108.0	15.0	16.9	0.0	0.0	0.0	0.0		2079.7	
Initial Spares (in millions)		5.7										5.7	
Total (in millions)		1894.8	50.7	108.0	15.0	16.9						2085.4	
Unit Cost (in millions)		0.04	0.07	0.06								0.04	
<p>Description:</p> <p>HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance and is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops.</p>													

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO			B. WEAPON			C. MANUFACTURER NAME			D. DATE		
			MISSILE PROCUREMENT / 2 / Other Missiles			LASER HELLFIRE MSL (BASIC/IHW/HFII)			HELLFIRE Systems Limited			February 1997		
									Liability Company					
			FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Flyaway Costs														
All-Up-Rounds			34133	750	46	83404	1800	46						
Containers			4549	3454	1	2351	1800	1						
GFE Explosives			441			1112								
Engineering Services			1929			3418			3000			3062		
Engineering Change Orders			782			1472								
Fielding			128			161			304			311		
Acceptance Testing			2311			3058			3584			3664		
Total Hardware			44273			94976			6888			7037		
Engineering Support														
Project Mgt Admin			2706			5069			2908			2956		
Production Engineering Support			3761			5924			5166			4658		
Total Engineering Support			6467			10993			8074			7614		
Non-Recurring														
Disposal of Tooling/Test Equipment						1999						2277		
IPF														
Cost Reduction Program														
Rate Tooling/Test Equipment														
Total Non-Recurring						1999						2277		
Total Flyaway			50740			107968			14962			16928		
Peculiar Support Equipment														
Environmental Protection Covers														
Total Peculiar Support Equipment														
Gross P-1 End Item Cost														
Less PY Adv Proc			50740			107968			14962			16928		
Net P-1 Full Funding														
Plus CY Adv Procurement			50740			107968			14962			16928		
Other Non P-1 Costs														
Initial Spares														
Mods														
Total			50740			107968			14962			16928		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE	February 1997
B. APPROPRIATION / BUDGET ACTIVITY											
MISSILE PROCUREMENT / 2 / Other Missiles											
C. P-1 ITEM NOMENCLATURE											
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A	
FY 96	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, FI	*FFP	MICOM	Jan-96	Jul-98	750	46	Yes	No		
FY 97	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, FI	**FFP	MICOM	Jan-97	May-99	1800	46	Yes	No		
REMARKS: * A competition was conducted between the Martin Marietta Technologies, Inc. and Rockwell International Corp. for HELLFIRE II development with firm-fixed-price not to exceed production options for FY 93-96. The development contract (with FY 93-96 production options) was awarded to Martin Marietta Technologies, Inc. after Rockwell, Int. chose not to bid. ** An additional option for FY 97 was added to the current production contract in Oct. 95.											

BUDGET ITEM JUSTIFICATION SHEET												DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										LONGBOW HELLFIRE (C70300)	
MISSILE PROCUREMENT / Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY			352	1005	1465	2000	2030	2020	2020	2060		12952	
COST (in millions)		41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4	
Initial Spares (in millions)													
Total (in millions)		41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4	
Unit Cost (in millions)			0.53	0.25	0.18	0.16	0.14	0.15	0.12	0.10		0.16	

Description:
Longbow HELLFIRE is the air-to-ground missile system component of the Longbow system. It is designed to defeat individual targets and substantially enhance survivability of the AH-64D Longbow Apache Helicopter. Longbow HELLFIRE uses a radio frequency guidance section. It will provide the capability to conduct battle both day and night in adverse weather and with battlefield obscurants present. With its radio frequency guidance section, the Longbow HELLFIRE complements the semi-active Laser HELLFIRE II with a true fire and forget capability, maximizing the ability of the Longbow Apache to operate in adverse weather and dramatically increases the aircraft's survivability. Further, the Longbow HELLFIRE missile provides a lock-on-before-launch (LOBL) or lock-on-after-launch (LOAL) capability depending on target range and movement parameters. Longbow does not change the AH-64 mission or role, but provides for increased mission effectiveness by enhancing lethality and survivability. The production buys support training, fielding and deployment of the AH-64D Longbow Helicopter. All three Longbow programs elements (Fire Control Radar, D Model Apache Helicopter and Longbow HELLFIRE Missile) were developed simultaneously and are scheduled to be fielded as a total system. Long Lead Items procurement in FY 95 provided for the procurement of materials for the first Low Rate Initial Production year (FY 96). This is required to meet system fielding requirements. Laser HELLFIRE and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)											DATE
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM NOMENCLATURE					February 1997	
MISSILE PROCUREMENT / 2 / Other Missiles					LONGBOW HELLFIRE (C70300)						
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A	
FY 96	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Jan-96	Mar-97	352	378	Yes	Yes	*	
FY 97	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Jan-97	Jun-98	****1056	202	Yes	Yes	**	
FY 98	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	MICOM	Dec-97	Jun-99	1465	157	Yes	Yes	**	
FY 99	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP***	MICOM	Dec-98	Jun-00	2000	150	Yes	Yes	**	
REMARKS:											
*System and development specifications are under government control, but the technical data package is not.											
**in the Longbow HELLFIRE's transition to production, performance based specifications will be baselined and used in all production contracts.											
***Planned five year multiyear contract.											
****Reflects actual contract quantity which is higher than FYDP. Program savings reinvested to buy additional missiles in accordance with the Cost Reduction Plan (1056).											

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE										LONGBOW HELLFIRE (C70300)										DATE										February 1997																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
COST ELEMENTS										M F R		S E R V		P R O C		A C C E P .		B A L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

BUDGET ITEM JUSTIFICATION SHEET										DATE	
APPROPRIATION / BUDGET ACTIVITY										February 1997	
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
JAVELIN (AAMS-M) SYSTEM SUMMARY (CC0007)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	1575	1010	1020	1080	3316	5458	5403	7037		701	26600
COST (in millions)	437.0	200.9	161.3	143.1	326.6	466.0	409.5	475.9	7.1	95.3	2722.6
Initial Spares (in millions)					4.2	4.8	6.9	8.6	9.5	9.4	43.4
Total (in millions)	437.0	200.9	161.3	143.1	330.8	470.8	416.4	484.5	16.6	104.7	2766.0
Unit Cost (in millions)	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1		0.1	0.1

DESCRIPTION: This project provides procurement funds for JAVELIN, the medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.

The Command Launch Unit (CLU) is reusable and consists of a target acquisition device, Built-In-Test (BIT), a trigger mechanism, and appropriate interfaces.

The round includes a missile encased in a disposable launch tube assembly. Attached to the launch tube are CLU mating connector, front and rear shock attenuators, removable front end cap, as well as a replaceable battery coolant unit (BCU), and adjustable and replaceable shoulder strap, and a replaceable desiccant.

JUSTIFICATION: The operational concept envisioned for fighting the antiarmor battle requires an effective, extended range, manportable, fire-and-forget, weapon for dismounted combat forces. JAVELIN's fire-and-forget technology allows the gunner to fire and immediately take cover, move to another fighting position or to reload. The JAVELIN provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against stationary and moving targets. The JAVELIN is capable of operating at twice the range (2000m) of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system will have a secondary mission of destroying bunkers and will provide defensive capability against hovering helicopters. The CLU can be used in a stand-alone mode for battlefield surveillance and target selection.

There were 3605 rounds procured through FY1997. Another 1080 are scheduled for procurement in FY1998 under the second year award of a three-year multiyear contract. The remaining 21,915 are planned for purchase in subsequent years.

The Marine Corps is also procuring the Javelin.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)		C. MANUFACTURER NAME Joint Venture T1/MM		D. DATE February 1997	
ID	CD	FY 96		FY 97		FY 98		FY 99		Qty	UnitCost
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each		
Missiles Cost Elements											
Missile Hardware- Recurring											
All Up Round		101918	1010	101	72236	1020	71	63	202313	3316	61
Engineering Services		14272			6848				6729		
Engineering Change Orders		1325			795				2265		
Contractor Prod Engineering Support		20041			11968				11858		
Acceptance Testing		840			1498				186		
Fielding		568			505				1937		
Subtotal Missile Hardware		138964			93850				225288		
Procurement Support											
Government Project Mgt Admin		6391			5056				4220		
Government Production Engineering Admin		9513			8119				11682		
Pub/Tech Data		577			417				329		
Subtotal Support Cost		16481			13592				16231		
Non-Recurring Production		1458			1451				19668		
Total Missile Flyaway		156903			108893				261187		
Command & Launch Hardware											
Command Launch Unit		20172	108	187	24394	206	118	98	39228	423	93
Engineering Services		2614			2072				666		
Engineering Change Orders		228			269				439		
Contractor Prod Engineering Support		3967			4146				2448		
Fielding		6315			2612				3155		
Non-Recurring Production		266			2373				3160		
Total CLU Flyaway		33562			35866				49096		
Training Devices											
Field Tactical Trainer - Student Station		6310	54	117	13283	129	103	84	12332	180	69
Field Tactical Trainer - Instructor Station		644	23	28	281	13	22	17	665	39	17
Basic Skills Trainer		3209	16	201	2545	15	170	136	2708	24	113
Missile Simulation Round		230	111	2	413	174	2	2	635	333	2
SubTotal Support Cost		10393			16522				16340		
Gross P-1 End Cost		200858			161281				326623		
Less: Prior Year Adv Proc											
Net P-1 Full Funding Cost		200858			161281				326623		
PLUS P-1 CY Adv. Proc.					34000						
Other Non P-1 Costs											
Initial Spares									4209		
MODS											
TOTAL		200858			195281				143112		

Simulator and Training Device Justification										Date	February 1997
Appropriation / P-1 Line Item			Weapon System (if applicable)				Equipment Nomenclature				PE
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY			Javelin (AAWS-M) Training Devices (H06300)				See Training System Description Paragraph				
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total		
Quantity (Each)											
Proc (\$000)	26621	16522	4711	16340	29926	25678	27765		147563		
RDT&E (\$000)											
O&S (\$000)											

TRAINING SYSTEM DESCRIPTION:

1. Field Tactical Trainer (FTT) Student Station - This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Training Evaluation Program (ARTEP) and U.S. Marine Corps Readiness Evaluation System.
2. The FTT Instructor Station - This item will be used in a traditional outdoor range environment at the institution and unit level to refine the basic individual skills required to operate the JAVELIN and for qualification training. The device will be used by the active U.S. Army and the U.S. Marine Corps.
3. Basic Skills Trainer (BST) - This item is used for development and retention of tactical and technical gunnery skills. Training will be conducted in both the institution and unit level. The training device will be used by the active U.S. Army and the U.S. Marine Corps.
4. Missile Simulation Round (MSR) - This item is a three-dimensional full-size replica, nonoperational mock-up of the JAVELIN tactical round. It is capable of attachment to a tactical Command Launch Unit (CLU). It will be used to practice handling, and assembly/disassembly procedures with the CLU. Additionally, it will be used in field handling and mobilization tactical deployment exercises. The device will be used by the active U.S. Army and the U.S. Marine Corps.

Simulator and Training Device Justification (Page 2)											Date		February 1997	
Appropriation / P-1 Line Item		Weapon System (if applicable)			IOC Date		Equipment Nomenclature			PE				
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY		AVELIN (AAWS-M) Training Devices			See Training System Description Paragraph									
Training Device By Type		Site	Del. Date	Ready For Trng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999		
						Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
						Each	\$000	Each	\$000	Each	\$000	Each	\$000	
FTT Student Station		Ft Benning	Apr-96	May-96	12	126	18946	129	13283	39	3293	180	12332	
FTT Instructor Station		Ft Benning	Apr-96	May-96	12	36	1564	13	281	10	174	33	665	
Basic Skills Trainer		Ft Benning	Aug-96	Sep-96	12	23	5383	15	2545	8	1084	24	2708	
Missile Simulation Round		Ft Benning	Oct-95	Nov 95	12	228	728	174	413	80	160	333	635	

Simulator and Training Device Justification (Page 3)										DATE		February 1997	
Training Device By Type		Weapon System (if applicable)											
FTT Student Station		Javelin (AAWS-M) Weapon System											
Description / Justification													
This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Evaluation Programs and the U.S. Marine Corps Readiness Evaluation System.													
Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost		
	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	Qty	Cost \$000	
	Each		Each		Each		Each		Each		Each		
HARDWARE COSTS													
Device (hardware)	126	13901	129	11353	39	2582	180	11195	1070	59925	1544	98956	
Engineering Change Order		153		125		28		126		60		492	
Nonrecurring		2022		326		264		295		1029		3936	
Production Eng Support		2870		1479		419		716		3050		8534	
SubTotal Hardware Costs	126	18946	129	13283	39	3293	180	12332	1070	64064	1544	111918	
SubTotal Support Costs													
TOTAL COSTS		18946		13283		3293		12332		64064		111918	

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		JAVELIN (AAWS-M) (ADV PROC) (CC0007)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY											
COST (in millions)	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<p>DESCRIPTION: These advance procurement funds will provide economic order quantities for year two and year three of the Javelin three-year multiyear procurement. JAVELIN is a medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.</p>											

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a) (COMPARISON OF REQUEST TO EXECUTION) (TOA, Dollars in Thousands)							CURRENT YEAR FOR FISCAL YEAR PROGRAM 1997	
Weapon System Type (Model/Series No.) JAVELIN (AAWS-M) (ADV PROC) (CC0007)		FIRST SYSTEM AWARD DATE May 1997		FIRST SYSTEM COMPLETION DATE August 2000		INTERVAL BETWEEN SYSTEM COMPLETIONS (MONTHS)		
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost		
(1)	(2)	(3)	(4)	(5)	(6)	(7)		
1. CFE								
2. GFE (Specify)								
3. SUBTOTAL								
4. EOQ (MYP)	4396	Dec-97	Dec-98	24	34000	34000		
5. (CFE)								
6. (GFE) (Specify)								
7. SUBTOTAL					34000	34000		
8. Design								
9. Other (Indicate Specific Items)								
10. TOTAL					34000	34000		
NARRATIVE DESCRIPTION								
These funds will procure economic order quantities for Javelin all up round (4396); command launch unit (693); field tactical trainer, student station (219); field tactical trainer, instructor station (49); and basic skills trainer (32). These funds will be awarded on year one of the Javelin three-year multiyear contract. The multiyear contract will be awarded May 97 with an option for year two to be awarded in Dec 97 and option two for year three in Dec 98.								

BUDGET ITEM JUSTIFICATION SHEET											DATE	February 1997	
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE										TOW 2 SYSTEM SUMMARY (C58300)	
MISSILE PROCUREMENT / Other Missiles		Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY		144783										144783	
COST (in millions)		2256.2	9.7	13.6	1.3	0.0	0.0	0.0	0.0	0.0		2280.8	
Initial Spares (in millions)		20.2										20.2	
Total (in millions)		2276.4	9.7	13.6	1.3							2301.0	
Unit Cost (in millions)		0.016										0.016	
<p>DESCRIPTION: TOW (Tube-Launched, Optically-Tracked, Wire-Guided Missile System) is designed to fulfill, the Heavy Antitank Assault Weapon System requirement for Close Combat Maneuver Forces. TOW is used primarily to destroy formations of armored vehicles, but is also an effective assault weapon against vehicles, field fortifications, and emplacements. TOW was a part of a combined united nations interagency force in Somalia and may be used against other regional threats. TOW can be fired from a ground tripod or from specifically adapted vehicles, e.g., ITV, Bradley, HMMWV, and Cobra. TOW is designated as the point target weapon on selected helicopters. TOW 2 has two distinct improvements, increase performance/hardening and a 6" full caliber warhead. TOW 2A added a small shaped tip of the TOW 2 probe to counter reactive armor, TOW 2B is an improvement to TOW 2 lethality based on a new warhead, fuze, and software to obtain a fly-over-shoot-down missile.</p> <p>JUSTIFICATION: FY 98 funding is required to complete plant transition/closure.</p>													

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO		B. WEAPON		C. MANUFACTURER NAME		D. DATE	
		MISSILE PROCUREMENT / 2 / Other Missiles		TOW 2 SYSTEM SUMMARY (C59300)				February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99	
Cost Elements		TotalCost	Qty	TotalCost	Qty	TotalCost	Qty	TotalCost	Qty
		\$000	Each	\$000	Each	\$000	Each	\$000	Each
Missile Hardware- Recurring									
Missile Contract									
GFE									
Engineering Change Orders									
(Value Engineering)									
SUBTOTAL MISSILE HARDWARE									
Non-Recurring Costs									
Capstan Block		5000		4600					
Plant Transition/Closure		1650		5868		1029			
SUBTOTAL NONRECURRING COST		6650		10468		1029			
PROCUREMENT SUPPORT-RECURRING									
Contractor Engineering		1775		1767		150			
Production Engineering		1113		1261		147			
Government Test		108		75					
Project Management Admin									
Fielding									
SUBTOTAL		2996		3103		297			
Total Flyaway		9646		13571		1326			
Support Cost									
Peculiar Support Equipment									
Launcher (N/S)									
Training Device (B/S)									
DMPE									
Engineering Change Orders		40							
Other (Specify) FDT		40							
SUBTOTAL SUPPORT COST									
Gross P-1 End Cost		9686		13571		1326			
Less: Prior Year Adv Proc									
Net P-1 Full Funding Cost		9686		13571		1326			
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares		40728		2311		5717		5821	
MODS				16		62755		63774	
TOTAL		50414		15898		69798		69595	

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / 2 / Other Missiles		TOW 2 SYSTEM SUMMARY (C59300)								
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 1996										
	Hughes Aircraft Tucson, AZ	SS/FFP	MICOM	Aug-96	N/A	N/A	N/A	N/A	N/A	
FY 1997										
Support & Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	Jun-97	N/A	N/A	N/A	N/A	N/A	
FY 1998										
Complete Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	TBD	N/A	N/A	N/A	N/A	N/A	
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET												DATE
APPROPRIATION / BUDGET ACTIVITY												February 1997
MISSILE PROCUREMENT ARMY/Activity 2												
P-1 ITEM NOMENCLATURE												
MLRS ROCKET (C65400)												
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program	
QUANTITY	478398	1326	1674	0	534	576	240	978	1290		485016	
COST (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9	
Initial Spares (in millions)												
Total (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9	
Unit Cost (in millions)	0.01	0.03	0.02		0.04	0.03	0.08	0.06	0.05		0.01	
<p>DESCRIPTION: The Extended Range (ER) Multiple Launch Rocket System (MLRS) includes the rocket assembly which is a tube-launched, spin stabilized, free flight rocket. Major assemblies of the rocket are a fused warhead, a rocket motor, four fins, a fin opening/restraint device, and four sabots. The rocket is packaged in a six rocket pod and can be fired one at a time or in ripples of two to six. The ER-MLRS rocket will enhance the capability of the existing MLRS by providing improvements in range, accuracy and effectiveness, and maneuver force safety (improved submunitions with self destruct fuzes).</p> <p>JUSTIFICATION: The objective of the system provides counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The increased range gives positioning flexibility and improves lateral ranging of targets on tomorrow's wider battlefronts. Operation Desert Storm identified the need for increased range to defeat long range targets. ER-MLRS will accomplish this mission.</p>												

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT ARMY/Activity 2				B. WEAPON MLRS EXTENDED RANGE ROCKET (C65402)				C. MANUFACTURER NAME		D. DATE February 1997		
Missiles Cost Elements	ID	CD	FY 96		FY 97		FY 98		FY 99		TotalCost \$Million	UnitCost \$	Qty Each	UnitCost \$	Qty Each
			TotalCost \$Million	Qty Each	TotalCost \$Million	UnitCost \$	TotalCost \$Million	Qty Each	TotalCost \$Million	UnitCost \$					
FLY-AWAY COSTS															
HARDWARE															
Tactical Round (Less GFE)															
M85 Submunition			25.669	1326		19358					11.628		534		21775
Engineering Services			8.209	68668		12					2.863		276612		10
Engineering Change Orders			8.777								2.508				
Fielding			0.740								0.190				
											0.062				
SUBTOTAL			43.395		40.056						17.251				
PROCUREMENT SUPPORT															
Project Management Admin															
Test & Evaluation			0.618		1.240						1.315				
Service Support Contract			0.489		0.000						0.276				
			0.105		0.108						0.113				
SUBTOTAL			1.212		1.348						1.704				
TOTAL			44.607		41.404						18.955				
GROSS P-1 END COST															
LESS: PRIOR YR ADV. PROC.															
NET P-1 FULL FUNDING COST															
PLUS CURRENT YEAR ADV. PROC.															
OTHER NON P-1 WEAPON SYSTEM COSTS															
INITIAL SPARES															
MODS															
TOTAL			44.607		41.404						18.955				

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT ARMY/Activity 2										
C. P-1 ITEM NOMENCLATURE										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Tactical Round (Less GFE)/ER-MLRS										
FY 94 & Prior	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	Jan-98	1326	19358	Yes	No	
FY 96	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Feb-97	May-98	1500	19243	No	No	
FY 97*	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Dec-98	May-00	534	21775	No	No	
FY 99	Lockheed Martin Vought Sys. Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM							
REMARKS: NO TACTICAL ROCKETS PROCURED IN FY 95. * Quantity differs from FYDP to reflect best current estimate.										

BUDGET ITEM JUSTIFICATION SHEET											
APPROPRIATION / BUDGET ACTIVITY										DATE	
MISSILE PROCUREMENT ARMY/Activity 2										February 1997	
P-1 ITEM NOMENCLATURE										MLRS LAUNCHER (C65900)	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	754			29	32	59	79	85	88		1126
COST (in millions)	1898.3	81.1	103.7	102.6	92.5	158.3	208.7	216.9	230.7		3092.8
Initial Spares (in millions)	153.9	5.1		1.0	7.1	8.6	16.5	23.2	27.3		242.6
Total (in millions)	2052.2	86.2	103.7	103.6	99.6	166.9	225.2	240.0	258.0		3335.4
Unit Cost (in millions)	2.7			3.6	3.1	2.8	2.9	2.8	2.9		3.0
<p>DESCRIPTION: The Multiple Launch Rocket System (MLRS) provides a high volume of fire power in a very short timeframe. Operationally, the concept is designed for the mobility, flexibility, and range requirements of the modern battlefield. Mounted on a derivative of the Bradley Fighting Vehicle (BFV), the 12-round launcher/loader requires a crew of three personnel to conduct launching missions. The design range in excess of 30 kilometers will allow coverage of 90 percent of the targets available at that range. Starting in FY 98 an Improved Fire Control System (IFCS) and an Improved Launcher Mechanical System (ILMS) will be procured and become part of the M270A1 upgrade. The IFCS is a modification to the current Fire Control System which provides the interface with the Fire Direction Center, the Munitions Controls and the MLRS Launcher. The IFCS will upgrade the system's electronics providing increased processing capability, an embedded global positioning system for future munitions and improved fault isolation for ease of launcher maintenance. The ILMS will allow faster target engagement on time sensitive, short dwell time targets and greatly reduces time on the firing point and reload operations in order to improve the survivability of the crew and the launcher. MLRS was jointly developed under a Memorandum of Understanding, signed July 1979, with France, Germany and the United Kingdom; Italy was added in July 1982. FY 96 and FY 97 program support funds are required for previously fielded launchers and to field launchers procured in FY 93, FY 94 and FY 95. FY 96 and FY 97 funds provide for remanufactured launchers for the South Carolina, Arkansas and South Dakota NG. Initial Spares to support launcher remanufacture in FY 96 and FY 97 are included in the total procurement cost. FY 98 and out quantities are for M270A1 upgrades. FY 98-03 funding also includes five batteries of rebuilt launchers for deployment to MLRS Heavy Divisions.</p>											
<p>JUSTIFICATION: The objectives of the system are counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The system is designed for adaptation to other warheads such as scatterable mines, terminally guided munitions, and other smart munitions. MLRS is the Army's rocket launch platform for the next decade. The IFCS provides faster response times for high priority targets, enhances survivability, supports attack operations, mitigates electronic hardware obsolescence and reduces O&S costs. The ILMS decreases stow to aim point timeline, enhances effectiveness in engaging and supporting the force, and increases MLRS platform survivability.</p>											

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO			B. WEAPON			C. MANUFACTURER NAME			D. DATE		
			MISSILE PROCUREMENT ARMY/Activity 2			MLRS LAUNCHER (C65900)						February 1997		
ID	CD	Missiles Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$Million	Each	\$	\$Million	Each	\$	\$Million	Each	\$	\$Million	Each	\$
GROUND EQUIPMENT HARDWARE														
		Launcher	11.144	29	384286	13.450	35	384286	42.310	21	2014762	55.672	32	1739750
		Carrier (GFE)	4.656	29	160552	7.069	35	201971				5.664	32	177000
		LP/C Trainer	1.491	58	25707	1.405	70	20071	0.461	42	10976	0.718	64	11219
		2X9 Launcher				22.145			25.035					
		Peculiar Support Equipment	23.056			18.285						18.243		
		Engineering Services	22.286			24.916			25.609			0.823		
		Engineering Change Orders	0.068			0.100			1.505			3.315		
		Fielding	8.290			7.002			0.000					
		SUBTOTAL	70.991			94.372			94.920			84.435		
PROCUREMENT SUPPORT														
		Project Management Admin	9.213			8.439			6.215			6.462		
		Service Support Contract	0.889			0.892			1.514			1.560		
		SUBTOTAL	10.102			9.331			7.729			8.022		
		TOTAL	81.093			103.703			102.649			92.457		
GROSS P-1 END COST LESS: PRIOR YR ADV. PROC.														
		NET P-1 FULL FUNDING COST	81.093			103.703			102.649			92.457		
PLUS CURRENT YEAR ADV. PROC														
		OTHER NON P-1 WEAPON SYSTEM COSTS												
		INITIAL SPARES	5.077			0.000			0.998			7.098		
		MODS	27.475			6.410			2.188			2.239		
		MOD SPARES	2.051			1.829			0.991			0.635		
		TOTAL	196.789			215.645			209.475			194.886		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										
B. APPROPRIATION / BUDGET ACTIVITY					DATE			February 1997		
MISSILE PROCUREMENT ARMY/Activity 2										
C. P-1 ITEM NOMENCLATURE										
MLRS LAUNCHER (C65900)										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Launcher M270 FY 95	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Mar-95	Nov-96	20	1826400	Yes	No	
Launcher Remanufacture FY 96	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	May-97	29	384286	Yes	No	
FY 97	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Nov-96	Nov-97	35	384286	Yes	No	
Launcher M270A1 FY 98*	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-97	Apr-00	21	2014762	Yes	No	
FY 99	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-98	Mar-01	32	1739750	Yes	No	
REMARKS: First deliveries of FY 96 remanufacture launchers by Red River Army Depot (RRAD) Oct 96; contract with Lockheed Martin Vought System delivers 20 launchers starting May 97.										
* Quantity differs from the FYDP to reflect the current best estimate.										

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE										MLRS LAUNCHER (065900)										DATE										February 1997																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
COST ELEMENTS										M F R										ACCEP. 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1136										J U N 1138									

Simulator and Training Device Justification									
Appropriation / P-1 Line Item		Weapon System (if applicable)				Equipment Nomenclature			
MISSILE PROCUREMENT/MLRS LAUNCHER		MLRS LAUNCHER				LAUNCHER MAINTENANCE TRAINER			
Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total
Quantity (Each)	0	0	2	2	0	2	0	0	6
Proc (\$Million)	0.000	0.000	2.000	2.000	0.000	2.000	0.000	0.000	6.000
RDT&E (\$Million)									0.000
O&S (\$Million)									0.000
TRAINING SYSTEM DESCRIPTION: The MLRS Launcher Maintenance Trainer is used by the Ordnance Missile and Munitions Center and School (OMMCS) to provide training in troubleshooting and maintenance procedures for the MOS 27M. The trainer consists of a classroom station to provide computer controlled troubleshooting simulations, a Launcher Loader Module (LLM) mockup to provide hands-on maintenance training (remove/replace) and an Electronics Repair Station to provide training in Automated Test Equipment (ATE) and off-launcher repair. Trainer density increases with M270A1 fielding requirements.									

BUDGET ITEM JUSTIFICATION SHEET												
DATE												February 1997
P-1 ITEM NOMENCLATURE												
ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)												
MISSILE PROCUREMENT/Other Missiles												
P-1 ITEM NOMENCLATURE												
Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program		
QUANTITY	1597	120	153	160	160	160				2447		
COST (in millions)	1024.0	121.3	97.8	103.0	100.1	111.6	13.8	0.0		1663.4		
Initial Spares (in millions)	2.3		0.9							4.2		
Total (in millions)	1026.3	121.3	98.7	103.0	100.1	111.6	13.8			1667.6		
Unit Cost (in millions)	0.6	1.0	0.6	0.6	0.6	0.7				0.7		

DESCRIPTION: The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. The inherent GPS accuracies will be achievable independent of range. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. Army TACMS includes Guided Missile and Launching Assembly; Test Set, Guided Missile System; Training Set, Guided Missile System: M-165; Trainer, Test Device, Guided Missile: M70; Modified M270 Launcher; and the Army TACMS Missile Facilities.

JUSTIFICATION: The Army TACMS is air transportable and provides a deep fires missile system that operates in near all-weather conditions, day or night. It is used to attack tactical surface-to-surface missile sites, air defense missile sites, logistics elements and command/control/communications complexes. The Block IA missile will destroy high value targets at ranges approximately twice that of the current Block I. The Block IA will be especially suited for destroying enemy surface-to-surface missile system launchers.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)		C. MANUFACTURER NAME Lockheed Martin Vought Systems		D. DATE February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99			
Cost Elements		TotalCost	Qty	UnitCost	TotalCost	Qty	TotalCost	UnitCost	TotalCost	Qty	UnitCost
		\$000	Each	\$000	\$000	Each	\$000	\$000	\$000	Each	\$000
Missile Hardware- Recurring											
Prime Contract		76978	120	641		97	673	574	92080	160	576
GFE									128		
Flight Kits		378							3100		
Engineering Services		16631							8666		
Engineering Change Orders (ECOs)		1862							870		
Fielding		579							270		
Subtotal Missile Hardware		96428							105114		
Procurement Support											
Project Management Admin		5599							4246		
Production Engineering Support		7743							6288		
Test and Evaluation		4546							3002		
Subtotal Procurement Support		17888							13536		
TOTAL MISSILE FLYAWAY		114316							118650		
Command & Launch Integration											
Command & Launch Integration Spt		755							1750		
Subtotal C&L Integration		755							1750		
Support Cost											
Missile Test Device		2704									
ATMF Test and Support Equipment		3528									
Subtotal Support Cost		6232									
Gross P-1 End Cost		121303							120400		
Less: Prior Year Adv Proc									17440		
Net P-1 Full Funding Cost		121303							102960		
PLUS P-1 CY Adv. Proc.											
Other Non P-1 Costs											
Initial Spares											
MODS											
TOTAL		121303							102960		

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles		B. WEAPON ATACMS BLK I (C98500)		C. MANUFACTURER NAME Lockheed Martin Vought Systems		D. DATE February 1997	
Missiles Cost Elements	ID CD	FY 96		FY 97		FY 98		FY 99	
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each
Missile Hardware- Recurring									
Prime Contract		33200	50	664					
GFE									
Flight Kits		5850							
Engineering Services		791							
Engineering Change Orders (ECOs)		135							
Fielding		39976							
Subtotal Missile Hardware									
Procurement Support									
Project Management Admin		3845							
Production Engineering Support		5216							
Test and Evaluation		2733							
Subtotal Procurement Support		11794							
TOTAL MISSILE FLYAWAY		51770							
Command & Launch Integration									
Command & Launch Integration Spt									
Subtotal C&L Integration									
Support Cost									
Missile Test Device									
ATMF Test and Support Equipment									
Subtotal Support Cost									
Gross P-1 End Cost		51770							
Less: Prior Year Adv Proc									
Net P-1 Full Funding Cost		51770							
PLUS P-1 CY Adv. Proc.									
Other Non P-1 Costs									
Initial Spares									
MODS									
TOTAL		51770							

Missiles Cost Analysis				A. APPN / BUDGET ACTIVITY TITLE/NO			B. WEAPON			ATACMS BLK IA (C98501)			C. MANUFACTURER NAME			D. DATE		
				MISSILE PROCUREMENT / 2 / Other Missiles						Lockheed Martin Vought Systems			February 1997					
				FY 96			FY 97			FY 98			FY 99					
Missiles				TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost			
Cost Elements				\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000			
Missile Hardware- Recurring																		
Prime Contract				43778	70	625	65290	97	673	87886	153	574	92080	160	576			
GFE										128			128					
Flight Kits				378			1216			318			3100					
Engineering Services				10781			14806			9977			8666					
Engineering Change Orders (ECOs)				1071			1094			827			870					
Fielding				444			142			520			270					
Subtotal Missile Hardware				56452			82548			99656			105114					
Procurement Support																		
Project Management Admin				1754			3906			4138			4246					
Production Engineering Support				2527			4537			5992			6288					
Test and Evaluation				1813			824			3668			3002					
Subtotal Procurement Support				6094			9267			13798			13536					
TOTAL MISSILE FLYAWAY				62546			91815			113454			118650					
Command & Launch Integration																		
Command & Launch Integration Spt				755						1040			1750					
Subtotal C&L Integration				755						1040			1750					
Support Cost																		
Missile Test Device				2704														
ATMF Test and Support Equipment				3528														
Subtotal Support Cost				6232														
Gross P-1 End Cost				69533			91815			114494			120400					
Less: Prior Year Adv Proc										16680			17440					
Net P-1 Full Funding Cost				69533			91815			97814			102960					
PLUS P-1 CY Adv. Proc.							69000											
Other Non P-1 Costs							963											
Initial Spares																		
MODS																		
TOTAL				69533			161778			98757			102960					

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / 2 / Other Missiles		ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (098510)								
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQD	IF YES W/A
Army TACMS Block I Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Nov-95	Mar-97	50	664			
Army TACMS Block IA Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Jun-96	Aug-97	70	625			
FY 97	LMVS, Dallas, TX	SS/FP	MICOM	Apr-97	May-98	97	673	No	Yes	Oct-96
FY 98	LMVS, Dallas, TX	SS/FP	MICOM	Dec-97	May-99	153	574	No	Yes	Oct-96
FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Oct-98	Mar-00	160	576			
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC) (C98510)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY											
COST (in millions)	0.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<p>DESCRIPTION: Funding for economic order quantity (EOQ) for the FY 98-01 Multiyear Procurement of Army TACMS. The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries.</p> <p>JUSTIFICATION: The EOQ funding is required for the buy out of the total Improved Missile Guidance Sets required for the multiyear procurement of the Army TACMS.</p>											

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a) (COMPARISON OF REQUEST TO EXECUTION) (TOA, Dollars in Thousands)						CURRENT YEAR FOR FISCAL YEAR PROGRAM 1997	
Weapon System Type (Model/Series No.) ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC)		FIRST SYSTEM AWARD DATE Dec-97		FIRST SYSTEM COMPLETION DATE May-99		INTERVAL BETWEEN SYSTEM COMPLETIONS (MONTHS) February 1997	
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1. CFE							
2. GFE (Specify)							
3. SUBTOTAL							
4. EOQ (MYP)	633	Jun-97	Sep-98	15	69000		
5. (CFE)							
6. (GFE) (Specify)							
7. SUBTOTAL					69000		
8. Design							
9. Other (Indicate Specific Items)							
10. TOTAL					69000		
NARRATIVE DESCRIPTION							
The bulk of the \$69M in FY 97 will be used to buy out the total 633 Improved Missile Guidance Sets (IMGS) units required for the FY 98-01 Multiyear Procurement.							

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS/BAT (CA6101)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	194	1223	1806
COST (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Unit Cost (in millions)					1.2	0.8	0.7	1.1	1.0		
<p>DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P3I submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA.</p> <p>JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organization. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight. The mission of the ATACMS Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P3I submunitions at ranges beyond the Block II system.</p>											

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS BLK II (CA6105)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	144	673	1206
COST (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Unit Cost (in millions)					1.2	0.8	0.7	0.8	0.8		

DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries.

JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organizations. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight.

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
MISSILE PROCUREMENT / Other Missiles											
P-1 ITEM NOMENCLATURE											
ATACMS BLK IIA (CA6110)											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY									50	550	600
COST (in millions)								9.9	62.5	459.3	532
Initial Spares (in millions)											
Total (in millions)								9.9	62.5	459.3	532
Unit Cost (in millions)									1.3		
<p>DESCRIPTION: The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P31 submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA.</p> <p>JUSTIFICATION: The mission of the ATACMs Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P31 submunitions at ranges beyond the Block II system.</p>											

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON ATACMS BLK II (CA6105)		C. MANUFACTURER NAME Lockheed Martin Vought Sys		D. DATE February 1997	
Missiles		FY 96		FY 97		FY 98		FY 99			
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	UnitCost
Missile Hardware- Recurring Prime Contract (Includes IPF) GFE Flight Kits Engineering Services Engineering Change Orders (ECOs) Fielding Subtotal Missile Hardware											
										39548	50
										1659	
										569	
										1408	
										250	
										43434	
Procurement Support Project Management Admin Production Engineering Support Test and Evaluation Subtotal Procurement Support										1940	
										2081	
										6251	
										10272	
										53706	
TOTAL MISSILE FLYAWAY											
Command & Launch Integration Command & Launch Integration Spt Subtotal C&L Integration										920	
										920	
Support Cost Missile Test Device ATMF Test and Support Equipment Subtotal Support Cost										2560	
										3595	
										6155	
Gross P-1 End Cost Less: Prior Year Adv Proc Net P-1 Full Funding Cost PLUS P-1 CY Adv. Proc. Other Non P-1 Costs Initial Spares MODS										60781	
										60781	
TOTAL										60781	

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE	February 1997
B. APPROPRIATION / BUDGET ACTIVITY		C. P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Other Missiles		ATACMS/BAT (CA6105)									
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV RECD	IF YES W/A	
ATACMS BLK II FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Jan-99	Jul-00	50	791				
REMARKS:											

BUDGET ITEM JUSTIFICATION SHEET											DATE
APPROPRIATION / BUDGET ACTIVITY											February 1997
P-1 ITEM NOMENCLATURE											
MISSILE PROCUREMENT / Other Missiles											
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY				305	547	1500	1900	2200	2900	10519	19871
COST (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Initial Spares (in millions)											
Total (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Unit Cost (in millions)				0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1
<p>DESCRIPTION: The BAT submunition is an anti-armor, top attack submunition with acoustic and infrared (IR) seekers working in tandem for autonomous attack of operating armored vehicles. The BAT is a guided submunition that searches for, tracks, and destroys armored, mobile targets. The Pre-Planned Product Improvement (P3I) BAT uses millimeter wave, infrared, and acoustic seekers in tandem to attack additional target arrays which include cold stationary or dug-in targets and surface-to-surface missile transporter erector launchers.</p> <p>JUSTIFICATION: The BAT submunitions will be carried deep into enemy territory by the Army Tactical Missile System (ATACMS) Block II. It will be dispensed over numerous high-payoff targets to selectively attack and destroy individual targets. By utilizing acoustic technology, BAT has the advantage of a large footprint which allows it to compensate for target location errors.</p>											

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles				B. WEAPON BAT (CA6100)		C. MANUFACTURER NAME Northrop Grumman Corp		D. DATE February 1997		
Missiles Cost Elements	ID CD	FY 96		FY 97		FY 98		FY 99				
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000		
Missile Hardware- Recurring Prime Contract (Includes IPF) GFE Flight Kits Engineering Services Engineering Change Orders (ECOs) Fielding Subtotal Missile Hardware							74188	305	243	82232	547	150
Procurement Support Project Management Admin Production Engineering Support Test and Evaluation Subtotal Procurement Support							1496			4553 2646 7 89438		
TOTAL MISSILE FLYAWAY							2920 3819 2213 8952 84636			3440 5189 2000 10629 100067		
Command & Launch Integration Command & Launch Integration Spt Subtotal C&L Integration												
Support Cost Missile Test Device ATMF Test and Support Equipment Subtotal Support Cost							572 572			70 70		
Gross P-1 End Cost Less: Prior Year Adv Proc Net P-1 Full Funding Cost PLUS P-1 CY Adv. Proc. Other Non P-1 Costs Initial Spares MODS							85208			100137		
TOTAL							85208			100137		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE
B. APPROPRIATION / BUDGET ACTIVITY										February 1997
C. P-1 ITEM NOMENCLATURE										
MISSILE PROCUREMENT / Other Missiles										
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
BAT										
FY 98	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Jan-98	Sep-99	305	243			
FY 99	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Mar-99	Sep-00	547	150			
REMARKS:										

BUDGET ITEM JUSTIFICATION SHEET										DATE
P-1 ITEM NOMENCLATURE										February 1997
APPROPRIATION / BUDGET ACTIVITY		MISSILE PROCUREMENT / Modification of Missiles								
		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
QUANTITY		0	0	0	0	0	0	0	0	
COST (in millions)		6.8	23.4	20.8	15.6	19.6	24.3	19.9	16.5	
<p>DESCRIPTION: The PATRIOT Weapon System Growth Program is in response to a Report of the Defense Science Board Task Force on PATRIOT Vulnerability (1978) (SECRET) and the Air Threat to Central Europe (1978-1988) ATCE-1988 (SECRET) dated 1 Aug 78, and was part of the Mid 1980 ASARC/DSARC process approving the initiation of PATRIOT production.</p> <p>JUSTIFICATION: The above funding is required to support the planned system Growth Program P3I, anticipated Materiel Changes which will add the following hardware enhancements/improvements to the PATRIOT Weapon System:</p>										

MODIFICATION INSTALLATION SUMMARY										Date
										February 1997
(TOA, Dollars in Millions)										
System/Modification	PY FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL	
PATRIOT MODS										
C50700	3.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.8	
BLOCK VII	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	
WEAPON CONTROL COMPUTER (WCC) UPGRADE	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	
CDI PHASE I	0.0	0.0	0.9	0.8	1.1	1.3	1.4	1.1	6.6	
COMMUNICATION ENHANCEMENTS	0.0	0.0	0.4	0.6	0.7	0.9	0.4	0.3	3.3	
BLOCK VIII (RAM MODS)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
AIR CONDITIONER UPGRADE	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4	
INTEGRATED DIAGNOSTIC SUPPORT SYSTEM	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
GEM PLUS/MINUS										
Totals	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8	

INDIVIDUAL MODIFICATION		Date
MODIFICATION TITLE: BLOCK VII 1-88-03-1224		February 1997
MODELS OF SYSTEMS AFFECTED: Radar Set, ECS, ICC, LS, BME, BMG, CRG		
DESCRIPTION / JUSTIFICATION: This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <div style="text-align: center;"> Major Milestones not applicable. </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div> <u>PLANNED</u> </div> <div> <u>ACCOMPLISHED</u> </div> </div>		

BLOCK VII 1-88-03-1224

MODIFICATION TITLE (Cont):

FINANCIAL PLAN: (\$ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	253	6.6	60	3.9	19	0.3													332	10.8
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	253	3.6	60	0.1	19	0.1													253	3.6
FY 1997 Eqpt -- Kits																			60	0.1
FY 1998 Eqpt -- Kits					19	0.1													19	0.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	253	3.6	60	0.1	19	0.1													332	3.8
Total Procurement Cost		10.2		4.0		0.4														14.6

METHOD OF IMPLEMENTATION Contractor Field Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: Dec 96 FY 1998: Dec 97 FY 1999: Jun 98

Delivery Date: FY 1997: Jun 97 FY 1998: Jun 98 FY 1999: Jun 98

Installation Schedule: BLOCK VII 1-88-03-1224													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													Total
FY 1996 & Prior	197	28	28										253
FY 1997				15	15	15	15						60
FY 1998								19					19
FY 1999													
Outputs													
FY 1996 & Prior	169	28	28	28									253
FY 1997				15	15	15	15						60
FY 1998								19					19
FY 1999													
Inputs													
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227			
MODELS OF SYSTEMS AFFECTED: ECS & ICC			
DESCRIPTION / JUSTIFICATION:			
<p>This task's objective is to increase (by four times) the speed and memory size of the current Weapon Control Computer (WCC) through replacement with a Very High Speed Integrated Circuit (VHSIC) WCC. The current WCC in the Engagement Control Station (ECS) and Information and Coordination Central (ICC) will be replaced by the VHSIC WCC. Peripheral devices which will permit the full utilization of the expanded WCC will be implemented by the replacement of the current Recovery Storage Unit (RSU) and the Mass Storage Unit (MSU) with an optical disk. This MC requires WCC software enhancements to be blocked with others in a Post Deployment Build 4(PDB-4). The Materiel Change will increase central processing speed throughout and available memory. Current RAM hardware usage is at 95% eliminating future growth. VHSIC technology and expanded memory will accommodate future throughput and growth.</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
Preliminary Design Review:	PLANNED 4QFY90	ACCOMPLISHED 4QFY90	
Critical Design Review:	2QFY91	2QFY90	
Contractor Test and Evaluation:	1QFY92	1QFY92	
Development Test and Evaluation:	2QFY92	3QFY92	
Initial Operational Test and Evaluation:	N/A	N/A	
IPR Production Decision	N/A	N/A	
TDP Available:	N/A	N/A	

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		CDI PHASE I 1-92-03-1235	
MODELS OF SYSTEMS AFFECTED:		RADAR SET	
DESCRIPTION / JUSTIFICATION:		Provides improvements to the identification process and enhances air defense effectiveness by reducing the potential for fratricide and providing better battlefield management of missile expenditures.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		Development effort completed.	
Preliminary Design Review:		PLANNED 4QFY90	ACCOMPLISHED 1QFY91
Critical Design Review:		3QFY91	4QFY91
Contractor Test and Evaluation:		2QFY92	3QFY92
Development Test and Evaluation:		2QFY92	1QFY94
Initial Operational Test and Evaluation:		N/A	N/A
IPR Production Decision		N/A	N/A
TDP Available:		N/A	N/A

INDIVIDUAL MODIFICATION															Date		February 1997			
MODIFICATION TITLE (Cont):															CDI PHASE I 1-92-03-1235					
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		14.6																		14.6
PROCUREMENT																				
Kit Quantity																				
Installation Kits	19	3.1	2	0.2															21	3.3
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	19	0.7	2	0.1															19	0.7
FY 1997 Eqpt -- Kits																			2	0.1
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	19	0.7	2	0.1															21	0.8
Total Procurement Cost		3.8		0.3																4.1

METHOD OF IMPLEMENTATION		Contractor Mod Team		ADMINISTRATIVE LEADTIME:		6 Months		PRODUCTION LEADTIME:		6 Months	
Contract Dates:		FY 1997: Nov 96		FY 1998:		FY 1999:		FY 1998:		FY 1999:	
Delivery Date:		FY 1997: May 97		FY 1998:		FY 1999:		FY 1998:		FY 1999:	

Installation Schedule: CDI PHASE I 1-92-03-1235													
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Date	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005		
Inputs													
FY 1996 & Prior	14	2	3										19
FY 1997				2									2
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior	13	1	2	3									19
FY 1997				2									2
FY 1998													
FY 1999													
Inputs													
FY 2000	1	2	3	4	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													

INDIVIDUAL MODIFICATION		Date	February 1997												
MODIFICATION TITLE:		COMMUNICATION ENHANCEMENTS 1-93-03-1237													
MODELS OF SYSTEMS AFFECTED:		Fire Unit													
DESCRIPTION / JUSTIFICATION:		<p>Communications Enhancements focuses on intra-battalion communications and improved interoperability at the fire unit level for contingency operations. It provides additional interfaces for told-in intelligence source; CADCI to provide automated switching within the battalion and permits fire unit voice and data interface into the Army Common User System (ACUS); high speed filters to permit access into long haul data transmission means; and, a fiber optic port to provide a local area network (LAN) interface with the battery command post.</p> <p>international agreements requirements.</p> <p>This is a subset of the full Remote Launch/Communication Enhancement Upgrade Program.</p>													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<p>Communication Upgrade Development Program was initiated in FY95 and is ongoing</p> <table border="0"> <thead> <tr> <th></th> <th>PLANNED</th> <th>ACCOMPLISHED</th> </tr> </thead> <tbody> <tr> <td>Preliminary Design Review:</td> <td>4QFY95</td> <td>3QFY96</td> </tr> <tr> <td>Critical Design Review:</td> <td>1QFY96</td> <td>4QFY96</td> </tr> <tr> <td>TDP Available:</td> <td>N/A</td> <td></td> </tr> </tbody> </table>			PLANNED	ACCOMPLISHED	Preliminary Design Review:	4QFY95	3QFY96	Critical Design Review:	1QFY96	4QFY96	TDP Available:	N/A	
	PLANNED	ACCOMPLISHED													
Preliminary Design Review:	4QFY95	3QFY96													
Critical Design Review:	1QFY96	4QFY96													
TDP Available:	N/A														

INDIVIDUAL MODIFICATION																	Date	February 1997
MODIFICATION TITLE (Cont):																		
COMMUNICATION ENHANCEMENTS 1-93-03-1237																		
FINANCIAL PLAN: (\$ in Millions)																		
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		9.4		6.1														15.5
PROCUREMENT																		
Kit Quantity																		
Installation Kits			14	8.8	14	8.2	6	11.3	7	13.6	8	13.8	4	11.4			53	67.1
Installation Kits Nonrecurring Equipment																		
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits			14	0.9													14	0.9
FY 1999 Eqpt -- Kits					14	0.8	6	1.1									14	0.8
FY 2000 Eqpt -- kits																	6	1.1
FY 2001 Eqpt -- kits											7	1.3	8	1.4	4	1.1	7	1.3
FY 2002 Eqpt -- kits																	8	1.4
FY 2003 Eqpt -- kits																	4	1.1
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost			14	0.9	14	0.8	6	1.1	7	1.3	8	1.4	4	1.1			53	6.6
Total Procurement Cost				9.7		9.0		12.4		14.9		15.2		12.5				73.7
METHOD OF IMPLEMENTATION Contractor Mod Team																		
Contract Dates: FY 1997: MAR 98																		
Delivery Date: FY 1997: SEP 99																		
ADMINISTRATIVE LEADTIME: 3 Months																		
PRODUCTION LEADTIME: 18 Months																		
FY 1998: MAR 98																		
FY 1999: SEP 99																		

Installation Schedule: COMMUNICATION ENHANCEMENTS 1-93-03-1237															
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4	1	2
Inputs															
FY 1996 & Prior															
FY 1997															
FY 1998															
FY 1999															
Outputs															
FY 1996 & Prior															
FY 1997															
FY 1998															
FY 1999															
Inputs															
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4	1	2
FY 2001															
FY 2002															
FY 2003															
Outputs															
FY 2000															
FY 2001															
FY 2002															
FY 2003															
Remarks:															

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: BLOCK VIII (RAM MODS) 1-89-03-1230			
MODELS OF SYSTEMS AFFECTED: Radar Set, ECS, ICC, LS, BME, BMG, CRG			
DESCRIPTION / JUSTIFICATION:			
<p>This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: None			
		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

MODIFICATION TITLE (Cont): BLOCK VIII (RAM MODS) 1-89-03-1230

FINANCIAL PLAN: (\$ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RD&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			127	4.2	211	6.0	369	6.5	411	8.5	225	4.3	200	3.7					1543	33.2
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3					127	0.4
FY 1998 Eqpt -- Kits																			211	0.6
FY 1999 Eqpt -- Kits																			369	0.7
FY 2000 Eqpt -- kits																			411	0.9
FY 2001 Eqpt -- kits																			225	0.4
FY 2002 Eqpt -- kits																			200	0.3
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3					1543	3.3
Total Procurement Cost				4.6		6.6	7.2			9.4		4.7		4.0						36.5

METHOD OF IMPLEMENTATION Contractor Field Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: DEC 97 FY 1998: DEC 98

Delivery Date: FY 1997: JUN 98 FY 1998: JUN 99

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Air Conditioner Upgrade 1-95-03-1243			
MODELS OF SYSTEMS AFFECTED: ICC, ECS, and CRG			
DESCRIPTION / JUSTIFICATION: The Air Conditioner Upgrade provides replacement of the cooling equipment in the Engagement Control Station, Information & Coordination Central, And Communications Relay Group. The current cooling equipment inside of these shelters has not been upgraded sufficiently since its original issue. The replacement of this equipment is required to keep pace with the increased power generation equipment being installed in the ECS, ICC, and CRG and to prevent equipment failure due to overheating. In addition, the current cooling equipment is freon based which is a hazard to both the troops and the environment.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: none		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INDIVIDUAL MODIFICATION														Date		February 1997					
MODIFICATION TITLE (Cont):														Air Conditioner Upgrade 1-95-03-1243							
FINANCIAL PLAN: (\$ in Millions)																					
RDT&E	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PROCUREMENT																					
Kit Quantity			294	6.9															294	6.9	
Installation Kits																					
Installation Kits Nonrecurring Equipment																					
Equipment Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits			294	0.3															294	0.3	
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
(FY(TC) Eqpt (xx kits)																					
Total Installation Cost			294	0.3															294	0.3	
Total Procurement Cost				7.2																7.2	
METHOD OF IMPLEMENTATION Contractor Mod Team														ADMINISTRATIVE LEADTIME:		6	Months	PRODUCTION LEADTIME:		6	Months
Contract Dates:		FY 1997:	OCT 96	FY 1998:		FY 1999:		FY 1997:		FY 1998:		FY 1999:		FY 1997:		FY 1998:		FY 1999:		FY 1999:	
Delivery Date:		FY 1997:	APR 97	FY 1998:		FY 1999:		FY 1997:		FY 1998:		FY 1999:		FY 1997:		FY 1998:		FY 1999:		FY 1999:	

Installation Schedule: Air Conditioner Upgrade 1-95-03-1243												
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	Date	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	
	& Prior	1	2	3	4	4	1	2	3	4	1	Total
Inputs												
FY 1996 & Prior												
FY 1997		147	147									294
FY 1998												
FY 1999												
Outputs												
FY 1996 & Prior												
FY 1997							147	147				294
FY 1998												
FY 1999												
Inputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Outputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Remarks:												

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244	
MODELS OF SYSTEMS AFFECTED:			
DESCRIPTION / JUSTIFICATION: At the fire unit level, maintenance monitors defect faults and automatically access diagnostic/repair procedures in electronic TMs and expert systems. Digital communications enable secure tele-maintenance from weapons platform to factory for remote diagnostics and adjustments.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244

MODIFICATION TITLE (Cont):

FINANCIAL PLAN: (\$ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	7	5.9	7	5.9															14	11.8
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits	7	0.2																	7	0.2
FY 1998 Eqpt -- Kits			7	0.2															7	0.2
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	7	0.2	7	0.2															14	0.4
Total Procurement Cost				6.1																12.2

METHOD OF IMPLEMENTATION Contractor Mod Team

Contract Dates: FY 1997: Feb 97 FY 1998: Feb 98 FY 1999: Feb 98

Delivery Date: FY 1997: Oct 97 FY 1998: Oct 98 FY 1999: Oct 98

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		GEM PLUS/MINUS 1-97-03-1245	
MODELS OF SYSTEMS AFFECTED:		PAC-2 Missile	
DESCRIPTION / JUSTIFICATION:			
Modification of existing PAC-2 missiles. Provides Cruise Missile Defense performance improvements by retrofitting PAC-2 missiles during missile recertification cycle with a Surface Acoustic Wave (SAW) Oscillator and a GEM fuze.			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED	ACCOMPLISHED
Major Milestones not applicable.			

INDIVIDUAL MODIFICATION															February 1997		
MODIFICATION TITLE (Cont):															Date		
GEM PLUS/MINUS 1-97-03-1245																	
FINANCIAL PLAN: (\$ in Millions)																	
RDT&E	FY 1996																
	and Prior																
PROCUREMENT	Qty	\$															
Kit Quantity																	
Installation Kits			75														75
Installation Kits Nonrecurring																	
Equipment																	
Equipment Nonrecurring																	
Engineering Change Orders																	
Data																	
Training Equipment																	
Support Equipment																	
Other																	
Interim Contractor Support																	
Installation of Hardware																	
FY 1996 & Prior Eqpt -- Kits																	
FY 1997 Eqpt -- Kits			75														75
FY 1998 Eqpt -- Kits																	
FY 1999 Eqpt -- Kits																	
FY 2000 Eqpt -- Kits																	
FY 2001 Eqpt -- Kits																	
FY 2002 Eqpt -- Kits																	
FY 2003 Eqpt -- Kits																	
(FY(TC) Eqpt (xx kits)																	
Total Installation Cost			75														75
Total Procurement Cost																	5.8
METHOD OF IMPLEMENTATION Contractor Mod Team																	
Contract Dates:																	
FY 1997: Jan 99																	
FY 1997: Jul 97																	
Delivery Date:																	
ADMINISTRATIVE LEADTIME:																	
FY 1998:																	
FY 1998:																	
PRODUCTION LEADTIME:																	
FY 1999:																	
FY 1999:																	
6 Months																	
18 Months																	

Installation Schedule: GEM PLUS/MINUS 1-97-03-1245														
		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997
		& Prior	1	2	3	4	1	2	3	4	1	2	3	4
Inputs														
FY 1996 & Prior								15	20	20	20			
FY 1997														
FY 1998														
FY 1999														
Outputs														
FY 1996 & Prior								15	20	20	20			
FY 1997														
FY 1998														
FY 1999														
Inputs														
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4	1
FY 2001														
FY 2002														
FY 2003														
Outputs														
FY 2000														
FY 2001														
FY 2002														
FY 2003														
Remarks:														

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								February 1997
MISSILE PROCUREMENT / Modification of Missiles		STINGER MODS (C20000)								
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0	0	
COST (in millions)	11.3	36.9	12.4	14.4	24.1	34.5	57.0	58.7		

DESCRIPTION
<p>STINGER Block I Upgrades - Hardware and software modifications to the STINGER RMP Missile System improves performance against targets which are slow moving, employing advanced counter-measures, or operating at night. These STINGER Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms including Air-To-Air STINGER, AVENGER, and the gripstock used in shoulder fired applications.</p> <p>STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks new EEPROMS must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each systems Interface Electronics Assembly.</p> <p>Bradley LINEBACKER (formerly Bradley STINGER Fighting Vehicle - Enhanced (BSFV-E)) - The Bradley LINEBACKER is an air defense system based upon minimal upgrades to the currently fielded Bradley STINGER Fighting Vehicle-MUA (BSFV-MUA). The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Developmental Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and a Bradley Fighting Vehicle-Operation Desert Storm Kit which are being fielded separately by CECOM and TACOM.</p> <p style="text-align: center;">JUSTIFICATION</p> <p>STINGER Block I Upgrades - The STINGER-RMP Missile is currently deficient in engagements against head/tail-on and slow moving targets, counter-measures, and night time engagements. There is also a safety deficiency whereby aviation platforms must super-elevate to fire the missile. The STINGER Block I Upgrade materiel change was developed to correct these deficiencies. This materiel change was recommended as the near term solution by the Air-to-Air Missile General Officer's Steering Committee.</p> <p>STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.</p> <p>Bradley LINEBACKER - The Warfighting Rapid Acquisition Panel approved the Bradley LINEBACKER as a rapid acquisition program on 26 January 95, which provided a Milestone IIIa (ASARC) decision to enter limited production to support the Army's Force XXI initiatives. An abbreviated Operational Requirements Document was approved and released by TRADOC. The Bradley LINEBACKER program leverages a portion of the fielded M2A2 Bradley Fighting Vehicle fleet, improves the employment of the approximately \$2 billion STINGER missile investment, and provides an armored Air Defense Artillery (ADA) fire unit with heavy forces employing Ground Based Sensor data as provided through FAADS C2I. This modestly costed program provides more firepower for the money than any other current Army program. This materiel solution corrects major ADA deficiencies in survivability, fire control, target acquisition and identification, with a reduction in crew size as a force savings.</p>

MODIFICATION INSTALLATION SUMMARY										
(TOA, Dollars in Millions)										
System/Modification	Date									
	February 1997									
	PY	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
STINGER MODS										
C20000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STINGER Block I Upgrades		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STINGER Platform Mods		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bradley LINEBACKER		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

INDIVIDUAL MODIFICATION			Date	February 1997
MODIFICATION TITLE:	STINGER Block I Upgrades	OSIP # 01-87-03-1510		
MODELS OF SYSTEMS AFFECTED:	STINGER RMP Missile			
DESCRIPTION / JUSTIFICATION:	<p>The STINGER Block I Upgrade materiel change incorporates hardware and software modifications to the STINGER-RMP missile system to increase overall missile performance in certain engagement scenarios and resolve a key aviation deficiency which requires aviation platforms to super-elevate. The engagement scenarios in which missile performance improves include head/tail-on and slow moving targets, counter-measures, and night time engagements. These changes include hardware changes to the missile and software changes to the command and launch platforms which include Air-to-Air STINGER, AVENGER, and gripstocks used in shoulder-fired applications. This materiel change was recommended by the Air-to-Air Missile General Officer's Steering Committee as the near term solution to the STINGER-RMP deficiencies.</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:				
	PLANNED	ACCOMPLISHED		
Begin development	3rd Qtr FY92	3rd Qtr FY92		
Production Qualification	4th Qtr FY95	4th Qtr FY95		
Software Critical Design Review	4th Qtr FY96	2nd Qtr FY96		
Software Performance Assessment	2nd Qtr FY97	2nd Qtr FY97		

INDIVIDUAL MODIFICATION																					Date	February 1997				
MODIFICATION TITLE (Cont):																					STINGER Block I Upgrades			OSIP # 01-87-03-1510		
FINANCIAL PLAN: (\$ in Millions)																										
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL							
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$						
RDT&E		30.8		3.7																34.5						
PROCUREMENT																										
Kit Quantity	1,850		1,300		471		906		1,665		1,658		1,664		1,228		476		11,218							
Installation Kits																										
Installation Kits Nonrecurring																										
Equipment		24.4		21.8		8.7		14.4		24.1		34.5		40.1		31.9		17.6		217.5						
Equipment Nonrecurring																										
Engineering Change Orders																										
Data																										
Training Equipment																										
Support Equipment																										
Other																										
Interim Contractor Support																										
Installation of Hardware costs are included in Equipment above.																										
Installation of Hardware																										
FY 1996 & Prior Eqpt - Kits																										
FY 1997 Eqpt -- Kits																										
FY 1998 Eqpt -- Kits																										
FY 1999 Eqpt -- Kits																										
FY 2000 Eqpt -- kits																										
FY 2001 Eqpt -- kits																										
FY 2002 Eqpt -- kits																										
FY 2003 Eqpt -- kits																										
(FY(TC) Eqpt (xx kits)																										
Total Installation Cost																										
Total Procurement Cost	1,850	24.4	1,300	21.8	471	8.7	906	14.4	1,665	24.1	1,658	34.5	1,664	40.1	1,228	31.9	476	17.6	11,218	217.5						

METHOD OF IMPLEMENTATION:		contractor		ADMINISTRATIVE LEAD-TIME:		3		Months		PRODUCTION LEAD-TIME:		18		Months	
Contract Dates:		FY 1997: 2nd Q, FY97		FY 1998: 2nd Q, FY98		FY 1999: 2nd Q, FY99				FY 1999: 2nd Q, FY99					
Delivery Date:		FY 1997: 4th Q, FY98		FY 1998: 4th Q, FY98		FY 1999: 4th Q, FY99				FY 1999: 4th Q, FY00					

METHOD OF IMPLEMENTATION:

contractor

FY 1997: 2nd Q, FY97

FY 1998: 4th Q, FY98

FY 1999: 2nd Q, FY99

FY 2000: 4th Q, FY00

ADMINISTRATIVE LEAD-TIME:

3 Months

PRODUCTION LEAD-TIME:

18 Months

INDIVIDUAL MODIFICATION			Date	February 1997
MODIFICATION TITLE:	STINGER Platform Mods	OSIP #	TBD	
MODELS OF SYSTEMS AFFECTED:	Manpads, Avenger, Bradley Linebacker, OH-58D			
<p>DESCRIPTION / JUSTIFICATION:</p> <p>In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks, new electronically erasable programmable read only memory (EEPROM) must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each system's Interface Electronics Assembly. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.</p>				
<p>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</p> <p style="text-align: center;"> <u>PLANNED</u> <u>ACCOMPLISHED</u> </p> <p style="text-align: center;">Development has been completed.</p>				

INDIVIDUAL MODIFICATION																								
MODIFICATION TITLE (Cont):										STINGER Platform Mods					OSIP # TBD									
FINANCIAL PLAN: (\$ in Millions)																								
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RDT&E																								
PROCUREMENT																								
0		2,425																2,425						
Kit Quantity																								
Installation Kits																								
Installation Kits Nonrecurring																								
	0.0		7.9																0.0	7.9				
Equipment																								
Equipment Nonrecurring																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
Other																								
Interim Contractor Support																								
Installation of Hardware																								
FY 1996 & Prior Eqpt -- Kits																								
FY 1997 Eqpt -- Kits																								
FY 1998 Eqpt -- Kits																								
FY 1999 Eqpt -- Kits																								
FY 2000 Eqpt -- Kits																								
FY 2001 Eqpt -- Kits																								
FY 2002 Eqpt -- Kits																								
FY 2003 Eqpt -- Kits																								
(FY(TC) Eqpt (xx kits)																								
Total Installation Cost																								
0	0.0	2,425	7.9															2,425	7.9					
Total Procurement Cost																								
METHOD OF IMPLEMENTATION of																								
Contract Dates:										ADMINISTRATIVE LEADTIME:					PRODUCTION LEADTIME:									
FY 1997:										2nd Qtr, FY97					3 Months					18 Months				
FY 1997:										4th Qtr, FY98					not applicable					not applicable				
FY 1997:										FY 1998:					not applicable					not applicable				
FY 1997:										FY 1998:					not applicable					not applicable				
Delivery Date:																								

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Bradley LINEBACKER	OSIP # TBD	
MODELS OF SYSTEMS AFFECTED: Bradley Stinger Fighting Vehicle - Manpads Under Armor (BSFV-MUA)			
<p>DESCRIPTION / JUSTIFICATION:</p> <p>The Bradley LINEBACKER, formerly the Bradley Stinger Fighting Vehicle-Enhanced (BSFV-E), is an air defense system based upon minimal upgrades to the currently fielded BSFV-MUA. The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Development Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and the Bradley Fighting Vehicle-Operational Desert Storm Kit, which are being fielded separately by CECOM and TACOM. This materiel solution corrects major Air Defense Artillery deficiencies in survivability, fire control, target acquisition and identification with a reduction in crew size as a force savings.</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
	PLANNED	ACCOMPLISHED	
Contractor technical test and evaluation	Feb-96	Mar-96	
Government technical test and evaluation	Apr-96	Jul-96	
Operational test and evaluation	Sep-96	Sep-96	
Production decision	Nov-96	Nov-96	

INDIVIDUAL MODIFICATION															February 1997	
MODIFICATION TITLE (Cont): Bradley LINEBACKER OSIP # TBD															Date	
FINANCIAL PLAN: (\$ in Millions)																
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL						
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty		
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
RDT&E	8.8								18.0					26.8		
PROCUREMENT																
Kit Quantity	8	99	0	0			33	40	194				374			
Installation Kits																
Installation Kits Nonrecurring																
Equipment	6.3	7.1	3.7	0.0			16.9	26.9	149.0					209.9		
Equipment Nonrecurring																
Engineering Change Orders																
Data																
Training Equipment																
Support Equipment																
Other																
Interim Contractor Support																
Proponency for Bradley LINEBACKER was transferred from Stinger PMO to Bradley PMO in FY97. The Army will request the \$7.1M in FY97 be moved to Bradley PMO through Omnibus Reprogramming. FY98 and outyear funding will be used for additional Stinger Block I Upgrades (C21300) thereby reducing modification unit cost.																
Installation of Hardware																
FY 1996 & Prior Eqpt - Kits																
FY 1997 Eqpt -- Kits																
FY 1998 Eqpt -- Kits																
FY 1999 Eqpt -- Kits																
FY 2000 Eqpt -- kits																
FY 2001 Eqpt -- kits																
FY 2002 Eqpt -- kits																
FY 2003 Eqpt -- kits																
(FY(TC) Eqpt (xx kits)																
Total Installation Cost																
Total Procurement Cost																
8 6.3 99 7.1 0 3.7 0 0.0 33 16.9 40 26.9 194 149.0 374 209.9																
METHOD OF IMPLEMENTATION:																
contractor																
FY 1997: 2nd Qtr, FY97															ADMINISTRATIVE LEAD-TIME: 3 Months	
FY 1997: 2nd Qtr, FY98															PRODUCTION LEAD-TIME: FY 1999: not applicable	
FY 1997: 2nd Qtr, FY98															FY 1999: not applicable	
Contract Dates:																
Delivery Date:																

BUDGET ITEM JUSTIFICATION SHEET							DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE						
MISSILE PROCUREMENT /Modification of Missiles		ITAS/TOW MODS (C61700)						
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	40.7	0.0	62.8	63.8	64.4	63.8	67.7	59.9
<p>DESCRIPTION: TOW Improved Target Acquisition System (ITAS) program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control Subsystems. The TOW ITAS will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the TOW system. Technology insertion developed for ITAS horizontally applies to Bradley TOW upgrades. ITAS takes advantage of state of the art infrared Standard Advanced Dewar Assembly (SADA) II technology to detect and recognize enemy targets day or night at greater ranges and with greater resolution. This allows the gunner to utilize TOW's maximum effective range, increasing lethality and survivability against armor and other targets. The embedded training software serves to increase gunner proficiency over that of the previous TOW system. ITAS will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of CONUS based force projection.</p> <p>The missile modification (MOIC) Materiel Change (MC) provides/installs MOICs (safety requirement) on Basic/ITOW heat missiles used for training. The MOIC precludes flight motor ignition and S&A arming in the event of missile malfunction.</p> <p>The objective of missile conversion and modification is to maintain a continuous source for training by utilizing out-of-production missiles (Basic TOW extended Range ITOW, rather than procuring training missiles). Mod kit procurement will continue until these missiles are depleted.</p> <p>The missile conversion MC converts Basic/ITOW heat missiles to practice missiles by replacing the heat warhead with a practice warhead. It also provides for a Missile Ordnance Inhibit Circuit (MOIC-Safety Requirement) and an epoxy coated T250 maraging steel launch motor.</p> <p>JUSTIFICATION: Funding is required for the ITAS program, which upgrades the detection recognition and fire control capabilities of the current Ground/HMMWV-Mounted TOW 2 System. ITAS also provides for growth potential for next generation missile. Funding is also required to maintain the production of the above essential MCs. These MCs are necessary to meet training/safety standards and upgrades the current TOW acquisition and fire control subsystems. This enhances Army posture against regionally based threats, promotes effective crisis response and increases overall readiness.</p>								

MODIFICATION INSTALLATION SUMMARY									
									February 1997
(TOA, Dollars in Millions)									
System/Modification	Prior FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
ITAS/TOW MODS									
C61700	12.6	0.0	0.0	1.6	0.0	0.0	0.0	0.9	15.1
MISSILE CONVERSION(HEAT TO PRACTICE)	4.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.7
MISSILE MODIFICATION(MOIC)	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.5	1.5
ITAS(IMPROVED TARGET ACQUISITION SYSTEM)									
Totals	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3

INDIVIDUAL MODIFICATION		
MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020		
MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A, C, D) BTM 71A (C59300)		
DESCRIPTION / JUSTIFICATION:		
<p>To convert TOW Basic/TOW heat missiles to practice missiles and to install a Missile Ordnance Inhibit Circuit (MOIC) on missiles used for training to prevent flyback the MOIC opens the circuit between the missile battery and flight motor ignition, and the safe and arming unlatch mechanism in the event of delay in ignition of the flight motor. Epoxy coated T250 maraging steel was incorporated into a new design as a result of launch motor failures (probable cause was identified as case deterioration due to stress corrosion.</p>		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Examples		<div> <div>PLANNED</div> <div>ACCOMPLISHED</div> </div>
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION														February 1997									
Date																							
MODIFICATION TITLE (Cont):																							
MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020																							
FINANCIAL PLAN: (\$ in Millions)																							
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
RDT&E																							
PROCUREMENT																							
Kit Quantity																							
Installation Kits																							
Installation Kits Nonrecurring																							
Equipment	60213	21.7													4977	4.7			65190	26.4			
Equipment Nonrecurring																							
Engineering Change Orders																							
Data																							
Training Equipment																							
Support Equipment																							
Other																							
Interim Contractor Support																							
Installation of Hardware																							
FY 1996 & Prior Eqpt -- Kits	55213	12.6							3328	1.6					1672	0.9			60213	15.1			
FY 1997 Eqpt -- Kits																							
FY 1998 Eqpt -- Kits																							
FY 1999 Eqpt -- Kits																							
FY 2000 Eqpt -- kits																							
FY 2001 Eqpt -- kits																							
FY 2002 Eqpt -- kits																							
FY 2003 Eqpt -- kits																	4977	2.7	4977	2.7			
(FY(TC) Eqpt - kits																							
Total Installation Cost	55213	12.6						3328	1.6						1672	0.9			65190	17.8			
Total Procurement Cost		34.3							1.6							5.6				44.2			
METHOD OF IMPLEMENTATION														Depot Team		ADMINISTRATIVE LEADTIME:		24 Months		PRODUCTION LEADTIME:		15 Months	
Contract Dates:														FY 97		FY 1998:		FY 1999		FY 1999			
Delivery Date:														FY 97		FY 1998:		1Q98		FY 1999			

Installation Schedule: MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020																	
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		February 1997	
& Prior		1		2		3		4		1		2		3		4	
Inputs		10950		3000		2000											
FY 1996 & Prior		10950															
FY 1997																	
FY 1998																	
FY 1999																	
Outputs																	
FY 1996 & Prior		21703		1664		1664											
FY 1997																	
FY 1998																	
FY 1999																	
Inputs		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005					
FY 2000		1		2		3		4		1		2		3		4	
FY 2001																	
FY 2002																	
FY 2003																	
Outputs																	
FY 2000*								836		836						1672	
FY 2001																	
FY 2002																	
FY 2003																	
Remarks:																	
* FY 96 HARDWARE																	

INDIVIDUAL MODIFICATION		
MISSILE MODIFICATION(MOIC) MC-1-82-03-3021		
MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A,C,D)BTM71A)(C59300)		
DESCRIPTION / JUSTIFICATION:		
To install Missile Ordnance Inhibit Circuit (MOIC) on TOW Basic/ITOW heat missile used for training to prevent flyback. The MOIC opens the circuit between the missile battery and flight motor ignitor and the safe and arming unlatch mechanisms which precludes flight motor ignitions and S&A arming in the event of a missile malfunction.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION														February 1996	
MODIFICATION TITLE (Cont): MISSILE MODIFICATION(MOIC) MC-1-82-03-3021														Date	
FINANCIAL PLAN: (\$ in Millions)															
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL					
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	\$	
RDT&E															
PROCUREMENT															
Kit Quantity															
Installation Kits															
Installation Kits Nonrecurring															
Equipment	35667							1000					36667	9.6	
Equipment Nonrecurring															
Engineering Change Orders															
Data															
Training Equipment															
Support Equipment															
Other															
Interim Contractor Support															
Installation of Hardware															
FY 1996 & Prior Eqpt -- Kits	34667			1000									35667	4.7	
FY 1997 Eqpt -- Kits															
FY 1998 Eqpt -- Kits															
FY 1999 Eqpt -- Kits															
FY 2000 Eqpt -- kits															
FY 2001 Eqpt -- kits															
FY 2002 Eqpt -- kits															
FY 2003 Eqpt -- kits															
(FY(TC) Eqpt -- Kits											1000	0.5	1000	0.5	
Total Installation Cost	34667			1000									36667	5.2	
Total Procurement Cost														14.8	

METHOD OF IMPLEMENTATION: Depot Team	ADMINISTRATIVE LEADTIME:	24	Months	PRODUCTION LEADTIME:	12	Months
Contract Dates:	FY 1997:			FY 1998:		
Delivery Date:	FY 1997:			FY 1998:		
		3Q97		FY 1999:		

Installation Schedule: MISSILE MODIFICATION(MOIC) MC-1-82-03-3021															
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4	1	2
2050		1000													
Inputs															
FY 1996 & Prior		2050													
FY 1997		250													
FY 1998		250													
FY 1999		250													
2050		250													
Outputs															
FY 1996 & Prior		2050													
FY 1997		250													
FY 1998		250													
FY 1999		250													
3050															
Inputs															
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4	1	2
FY 2001		FY 2001													
FY 2002		FY 2002													
FY 2003		FY 2003													
Outputs															
FY 2000		FY 2000													
FY 2001		FY 2001													
FY 2002		FY 2002													
FY 2003		FY 2003													
3050															
Total															
3050															
Remarks:															

INDIVIDUAL MODIFICATION		
ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028		
MODELS OF SYSTEMS AFFECTED: IOW Missile System Launcher (59300)		
DESCRIPTION / JUSTIFICATION:		
<p>TOW ITAS Program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control subsystems. The TOW will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the the TOW system, it will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of forward presence.</p>		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED
Examples		Oct-94
Preliminary Design Review:		
Critical Design Review:		Jul-94
Contractor Test and Evaluation:		Aug-95
Development Test and Evaluation:		Jan-96
Initial Operational Test and Evaluation:		Jul-96
IPR/LRIP Production Decision		Jul-96

INDIVIDUAL MODIFICATION														Date		February 1997									
MODIFICATION TITLE (Cont):																		ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028							
FINANCIAL PLAN: (\$ in Millions)																									
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL								
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$							
RDT&E	104.6			0.1														104.7							
PROCUREMENT																									
Kit Quantity	25				61		92		112		128		150		117		372	1057							
Installation Kits																									
Installation Kits Nonrecurring																									
Equipment	31.3				52.0		46.4		51.2		53.6		60.4		48.5		151.8	495.2							
Equipment Nonrecurring																									
Engineering Change Orders																									
Data	0.7						0.8		0.6		0.2		0.2		0.2		0.5	4.0							
Training Equipment	2.7						4.4		5.2		5.4		6.4		4.3		15.4	47.6							
Support Equipment							7.6		6.0		4.0							20.1							
Other	1.3						2.1		1.2		0.3		0.4		0.4		0.8	7.5							
Interim Contractor Support							1.5											3.0							
Installation of Hardware																									
FY 1996 & Prior Eqpt -- Kits					16	0.1	9											25							
FY 1997 Eqpt -- Kits																		61							
FY 1998 Eqpt -- Kits																		92							
FY 1999 Eqpt -- Kits																		112							
FY 2000 Eqpt -- kits																		128							
FY 2001 Eqpt -- kits																		150							
FY 2002 Eqpt -- kits																		117							
FY 2003 Eqpt -- kits																		372							
(FY(TC) Eqpt (xx kits)																									
Total Installation Cost					16	0.1	59	0.1	87	0.2	108	0.3	126	0.3	146	0.5	515	1057							
Total Procurement Cost		36.0				62.8		61.8		64.4		63.8		67.7		53.9		580.2							
METHOD OF IMPLEMENTATION: DEPOT TEAM																		11 Months							
Contract Dates:																		FY 1998: 1Q98		FY 1999: 1Q99		PRODUCTION LEADTIME:		FY 1999: 1Q99	
Delivery Date:																		FY 1998: 1Q99		FY 1999: 1Q00					

Installation Schedule: ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028																							
FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				February 1997			
& Prior				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Total			
Inputs																							
FY 1996 & Prior				4	2	6	6	7												25			
FY 1997																				61			
FY 1998				15				15	15	16											92		
FY 1999				21				23	24	24													
Outputs																							
FY 1996 & Prior				4				6	6	9												25	
FY 1997																							
FY 1998				5				15	15	15	11											61	
FY 1999				7				21	24	24	16											92	
FY 2000				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Total			
Inputs																							
FY 2000				27				27	28	30												112	
FY 2001				30				32	33	33												128	
FY 2002				36				36	39	39												150	
FY 2003				30				30	30	30	27												117
Outputs																							
FY 2000				9				27	27	29	20												112
FY 2001				10				30	33	33	22												128
FY 2002				12				36	37	39	26												150
FY 2003				10				30	30	30	18												117
Remarks:																							

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE									
MISSILE PROCUREMENT / Modification of Missiles		MLRS MODS (C87500)									
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003			
QUANTITY	0	0	0	0	0	0	0	0	0		
COST (in millions)	27.5	6.4	2.2	2.2	2.3	2.6	2.6	2.5	2.5		

DESCRIPTION: Modification kits are procured for previously manufactured MLRS launchers and the associated training and ground support equipment. The following page provides a list of approved modifications.

BUDGET ITEM JUSTIFICATION SHEET		DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE	
MISSILE PROCUREMENT /Modification of Missiles		MLRS MODS (C67500)	

OSIP No.	Description	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-84-03-0502	All PYs Improved Electronic Unit (IEU)	71.5	0.7	0.5	0.6	0.6	0.7	0.7
1-85-03-0508	Launcher Loader Module Improvements (LLM)	33.5	0.2	0.0	0.0	0.0	0.0	0.0
1-85-03-0509	Improved Launcher (Deep Attack) Modifications	37.5	0.0	0.0	0.0	0.0	0.0	0.0
1-94-03-0520	Carrier Improvements Phase IV	3.3	0.1	0.0	0.0	0.0	0.0	0.0
1-94-03-0522	Transmission Electronic Controller (TEC)	26.3	0.0	0.0	0.0	0.0	0.0	0.0
1-94-03-0525	Fire Suppression Change	0.0	0.8	0.1	0.0	0.0	0.0	0.0
1-94-03-0528	Interim IPDS Launcher	16.2	2.2	0.5	0.6	0.6	0.7	0.7
1-94-03-0529	Interim MS Launcher	9.9	0.1	0.1	0.1	0.1	0.1	0.1
1-95-03-0530	Hoist Carriage Assembly	3.8	0.9	0.0	0.0	0.0	0.0	0.0
1-95-03-Obse	Obsolescence Mitigation/ECP Reliability Integration	2.2	1.4	1.0	1.0	1.3	1.1	1.0
Totals		204.2	6.4	2.2	2.3	2.6	2.6	2.5

MODIFICATION INSTALLATION SUMMARY									
(TOA, Dollars in Millions)									
Date February 1997									
System/Modification	PV FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
MLRS MODS									
C67500									
Improved Electronic Unit (IEU)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Launcher Loader Module Improvements (LLM)	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3
Improved Launcher (Deep Attack) Modifications	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Carrier Improvements Phase IV	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Transmission Electronic Controller (TEC)	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
Fire Suppression Change	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3
Interim IPDS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interim MS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hoist Carriage Assembly	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Obsolescence Mitigation/ECP Reliability Integration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	26.9	1.1	0.1	0.1	0.0	0.0	0.0	0.0	28.2

INDIVIDUAL MODIFICATION		Date	February 1987				
MODIFICATION TITLE:		Improved Electronic Unit (IEU) 1-84-03-0502					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		<p>This improvement increases the operational capability of the existing Version 4.0 software to provide the necessary growth capability for new missile and rocket programs. The IEU expands the operational memory capability of the MLRS Fire Control System (FCS) from 96K ROM and 32K RAM to 612 DRAM. Six computer interface ports, an internal magnetic bubble memory, and three more efficient minicomputers are incorporated which enhance flexibility to accommodate planned and potential warhead growth programs. The IEU allows usage of Version 6.0x reprogrammable software and can be updated by the user with a portable Program Load Unit (PLU). The Line Replaceable Unit (LRU) Test Program Set (TPS) support equipment consists of software, hardware and documentation used in conjunction with Base Shop Test Stations (BSTS) and Integrated Family of Test Equipment (IFTE) to detect and isolate LRU failures.</p>					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td>PLANNED</td> <td>ACCOMPLISHED</td> </tr> <tr> <td></td> <td>Development complete - Incorporated into current production.</td> </tr> </table>		PLANNED	ACCOMPLISHED		Development complete - Incorporated into current production.
PLANNED	ACCOMPLISHED						
	Development complete - Incorporated into current production.						

INDIVIDUAL MODIFICATION																	February 1997
Date																	
MODIFICATION TITLE (Cont): Improved Electronic Unit (IEU) 1-84-03-0502																	
FINANCIAL PLAN: (\$ in Millions)																	
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E																	
PROCUREMENT																	
Kit Quantity																	
Installation Kits																	
Installation Kits Nonrecurring Equipment	866	36.6															866 36.6
Equipment Nonrecurring																	
Engineering Change Orders																	
Data																	
Training Equipment																	
Support Equipment*		34.2		0.7		0.5		0.5		0.6		0.6		0.7		0.7	38.5
Other																	
Interim Contractor Support																	
Installation of Hardware																	
FY 1996 & Prior Eqpt -- 866	866	0.7															866 0.7
FY 1997 Eqpt -- Kits																	
FY 1998 Eqpt -- Kits																	
FY 1999 Eqpt -- Kits																	
FY 2000 Eqpt -- kits																	
FY 2001 Eqpt -- kits																	
FY 2002 Eqpt -- kits																	
FY 2003 Eqpt -- kits																	
(FY(TC) Eqpt (xx kits)																	
Total Installation Cost	866	0.7															866 0.7
Total Procurement Cost		71.5		0.7		0.5		0.5		0.6		0.6		0.7		0.7	75.8
METHOD OF IMPLEMENTATION Depot Field Application																	
Contract Dates: FY 1997: FY 1998: FY 1999:																	
Delivery Date: FY 1997: FY 1998: FY 1999:																	
ADMINISTRATIVE LEADTIME: Months																	
PRODUCTION LEADTIME: Months																	

Installation Schedule: Improved Electronic Unit (IEU) 1-84-03-0502													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													Total
FY 1996 & Prior		866											866
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior		866											866
FY 1997													
FY 1998													
FY 1999													
		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005	
		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													Total
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													
*TPS Support Equipment does not require installation funding.													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:		Launcher Loader Module Improvements (LLM) 1-85-03-0508	
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)	
DESCRIPTION / JUSTIFICATION:		<p>This modification retrofits fielded vehicles for the following: Adds new metal blast panels to prevent damage to front launcher cage structure and blast doors; installs new environmentally sealed limit switches; welds in stiffening plate to motor pump assembly; provides moisture tight cover to the azimuth resolver; and adds support lugs and welds to the upper elevation actuator attach fitting to improve aft corner post. These improvements are required to correct operational deficiencies identified during OT-III testing and subsequent fielding. This modification accomplishes retrofit of the fielded vehicles as part of the Block Mod Effort in conjunction with MC 1-85-03-0507.</p>	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED _____ ACCOMPLISHED _____ Development complete - Incorporated into current production.	

INDIVIDUAL MODIFICATION															Date		February 1997										
MODIFICATION TITLE (Cont):															Launcher Loader Module Improvements (LLM) 1-85-03-0508												
FINANCIAL PLAN: (\$ in Millions)																											
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL									
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E																											
PROCUREMENT																											
Kit Quantity																											
Installation Kits																											
Installation Kits Nonrecurring Equipment		433		22.2														433									
Equipment Nonrecurring Engineering Change Orders																		22.2									
Data																											
Training Equipment																											
Support Equipment																		0.2									
Other																											
Interim Contractor Support																											
Installation of Hardware																											
FY 1996 & Prior Eqpt -- Kits		433		11.3														433									
FY 1997 Eqpt -- Kits																											
FY 1998 Eqpt -- Kits																											
FY 1999 Eqpt -- Kits																											
FY 2000 Eqpt -- kits																											
FY 2001 Eqpt -- kits																											
FY 2002 Eqpt -- kits																											
FY 2003 Eqpt -- kits																											
(FY(TC) Eqpt (xx kits)																											
Total Installation Cost		433		11.3														433									
Total Procurement Cost																		11.3									
				33.5														33.7									
METHOD OF IMPLEMENTATION Depot Field Application																				ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:		Months			
Contract Dates:																				FY 1997:		FY 1998:		FY 1999:		Months	
Delivery Date:																				FY 1997:		FY 1998:		FY 1999:		Months	

Installation Schedule: Launcher Loader Module Improvements (LLM) 1-85-03-0508													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior	1	2	3	4	1	2	3	4	1	2	3	4	Total
Inputs													
FY 1996 & Prior		433											
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior		433											
FY 1997													
FY 1998													
FY 1999													
Inputs													
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4
FY 2001													
FY 2002													
FY 2003													
Outputs													
FY 2000													
FY 2001													
FY 2002													
FY 2003													
Remarks:													
Support equipment for Aft Corner Post modification.													

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Improved Launcher (Deep Attack) Modifications 1-85-03-0509		
MODELS OF SYSTEMS AFFECTED:	MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)		
DESCRIPTION / JUSTIFICATION:	<p>The Improved Launcher (Deep Attack) modification kit consists of the Payload Interface Module (PIM), with associated cables and hardware, which controls command and power distribution to the warhead and a modification to the Fire Control System (FCS) Electronic Box (EB). This modification provides for upgrade to the existing MLRS capabilities, including training devices, and is required to support the addition of Army TACMS and other growth capabilities. The Improved Launcher modification provides the necessary interfaces between the warheads, the launcher, the EB, and the Improved Electronic Unit (IEU). The modification provides the capability of supplying power to, and communication with, payload onboard processors for transmitting prelaunch programming information and for the management of payload-peculiar time-sequencing interface parameters. The PIM, as part of the Improved Launcher Mod Kit, becomes the standard payload interface module for all MLRS launchers. The incorporation of the Improved Launcher modification causes no changes to the MLRS force structure.</p>		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED _____	ACCOMPLISHED Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION															February 1997	
MODIFICATION TITLE (Cont): Improved Launcher (Deep Attack) Modifications 1-85-03-0509															Date	
FINANCIAL PLAN: (\$ in Millions)																
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL						
	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty					
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$					
RDT&E																
PROCUREMENT																
Kit Quantity																
Installation Kits																
Installation Kits Nonrecurring Equipment	363										363	32.2				
Equipment Nonrecurring																
Engineering Change Orders																
Data																
Training Equipment																
Support Equipment												0.5				
Other																
Interim Contractor Support																
Installation of Hardware																
FY 1996 & Prior Eqpt -- 363	363										363	4.8				
FY 1997 Eqpt -- Kits																
FY 1998 Eqpt -- Kits																
FY 1999 Eqpt -- Kits																
FY 2000 Eqpt -- kits																
FY 2001 Eqpt -- kits																
FY 2002 Eqpt -- kits																
FY 2003 Eqpt -- kits																
(FY(TC) Eqpt (xx kits)																
Total Installation Cost	363										363	4.8				
Total Procurement Cost												37.5				
METHOD OF IMPLEMENTATION Depot Field Application															Months	
Contract Dates: FY 1997: FY 1998: FY 1999:															PRODUCTION LEADTIME: FY 1999: FY 1999:	
Delivery Date: FY 1997: FY 1998: FY 1999:															Months	

Installation Schedule: Improved Launcher (Deep Attack) Modifications 1-85-03-0509															
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003	
& Prior		1	2	3	4	1	2	3	4	1	2	3	4	1	2
Inputs															
FY 1996 & Prior		363													
FY 1997															
FY 1998															
FY 1999															
Total															
363															
Outputs															
FY 1996 & Prior		363													
FY 1997															
FY 1998															
FY 1999															
Total															
363															
Inputs															
FY 2000															
FY 2001															
FY 2002															
FY 2003															
Outputs															
FY 2000															
FY 2001															
FY 2002															
FY 2003															
Total															
363															
Remarks:															

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Carrier Improvements Phase IV 1-94-03-0520		
MODELS OF SYSTEMS AFFECTED:	MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)		
DESCRIPTION / JUSTIFICATION:	<p>This modification is a consolidation of nine (9) Class I ECPs addressing reliability, availability, maintainability, and dependability (RAM-D). Improvements include the addition of a fuel system heater valve, improved cab ventilation duct system, speedometer relocater, and a gas particulate filter unit plug for the NBC heater. This modification also corrects four (4) safety hazards by improving the commander's work station, adding a map light for tactical conditions, adding mounting provisions for an additional hand held fire extinguisher, and provides measures to prevent the existing engine compartment fire extinguisher from being inadvertently discharged.</p>		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<u>PLANNED</u>	<u>ACCOMPLISHED</u> Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION														
Carrier Improvements Phase IV 1-94-03-0520														
MODIFICATION TITLE (Cont):														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits Nonrecurring														
Equipment	758	1.1									758	1.1		
Equipment Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Other														
Interim Contractor Support														
Installation of Hardware														
FY 1996 & Prior Eqpt -- 758	733	2.2	25	0.1							758	2.3		
FY 1997 Eqpt -- Kits														
FY 1998 Eqpt -- Kits														
FY 1999 Eqpt -- Kits														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
(FY(TC) Eqpt (xx kits)														
Total Installation Cost	733	2.2	25	0.1							758	2.3		
Total Procurement Cost		3.3		0.1								3.4		

METHOD OF IMPLEMENTATION Depot Field Application				ADMINISTRATIVE LEADTIME:				8 Months				PRODUCTION LEADTIME:				6 Months			
Contract Dates:				FY 1997:				FY 1998:				FY 1999:				FY 1999:			
Delivery Date:				FY 1997:				FY 1998:				FY 1999:				FY 1999:			

INDIVIDUAL MODIFICATION		Date	February 1997				
MODIFICATION TITLE:		Transmission Electronic Controller (TEC) 1-94-03-0522					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		<p>The TEC, which is an automatic electronically controlled transmission, replaces the previous hydromechanical transmission. The benefits of the TEC modification are increased power availability, ability to tow in neutral, decreased maintenance, improvements in slope capability, shift synchronism, fuel consumption, cold temperature performance, and maneuverability in restricted areas. Through the modification of the MLRS fleet of vehicles, this will allow a commonality of transmissions between all vehicle subsystems for the M270 MLRS.</p>					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table><tr><td>PLANNED</td><td>ACCOMPLISHED</td></tr><tr><td></td><td>Development complete - Incorporated into current production.</td></tr></table>		PLANNED	ACCOMPLISHED		Development complete - Incorporated into current production.
PLANNED	ACCOMPLISHED						
	Development complete - Incorporated into current production.						

INDIVIDUAL MODIFICATION														February 1997	
MODIFICATION TITLE (Cont): Transmission Electronic Controller (TEC) 1-94-03-0522														Date	
FINANCIAL PLAN: (\$ in Millions)															
RD&E PROCUREMENT Kit Quantity Installation Kits Installation Kits Nonrecurring Equipment Equipment Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL					
	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty \$	Qty	Qty			
	696 18.9									696 18.9					
	590 7.4									590 7.4					
	590 7.4									590 7.4					
	26.3									26.3					
METHOD OF IMPLEMENTATION Contr Field Team Applica															
Contract Dates: FY 1997: FY 1998: FY 1999:															
Delivery Date: FY 1997: FY 1998: FY 1999:															
ADMINISTRATIVE LEADTIME: 6 Months															
PRODUCTION LEADTIME: 3 Months															

Installation Schedule: Transmission Electronic Controller (TEC) 1-94-03-0522												
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997
& Prior		1	2	3	4	1	2	3	4	1	2	3
Inputs												
FY 1996 & Prior												
FY 1997												
FY 1998												
FY 1999												
Outputs												
FY 1996 & Prior												
FY 1997												
FY 1998												
FY 1999												
Inputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Outputs												
FY 2000												
FY 2001												
FY 2002												
FY 2003												
Remarks:												
Balance of kits (106) will be used for spares. No quantities associated with TEC contractor support in FY 97.												
Total												
696												
590												

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Fire Suppression Change 1-94-03-0525			
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)			
DESCRIPTION / JUSTIFICATION:			
<p>The purpose of this modification is to comply with Department of Defense Directive (DoDD) 6050.9 for the elimination of Chlorofluorocarbons (CFC) and Halons. The objective of this modification is to identify and eliminate all Ozone Depleting Chemicals (ODC) and all Ozone Depleting Substances (ODS) by Fiscal Year 2000. The initial phase of this program directs modification of mounting brackets to allow CO2 bottles to be used in lieu of the current 2.75 pound Halon bottles. Swap-out for the hand-held bottles is being done by the U.S. Army Tank and Automotive Command (TACOM) and began 1Q95. The second phase will direct the modification and/or conversion of the 7 pound engine compartment Halon bottle to an alternative substance.</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
		<u>PLANNED</u> Will be incorporated into production.	<u>ACCOMPLISHED</u>

INDIVIDUAL MODIFICATION														
MODIFICATION TITLE (Cont): Fire Suppression Change 1-94-03-0525														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits Nonrecurring Equipment	857	0.7											857	0.7
Equipment Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Other														
Interim Contractor Support														
Installation of Hardware														
FY 1996 & Prior Eqpt -- Kits														
FY 1997 Eqpt -- 857	158	0.1					269	0.1						0.3
FY 1998 Eqpt -- 430					430	0.1								
FY 1999 Eqpt -- 427														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
(FY(TC) Eqpt (xx kits)														
Total Installation Cost	158	0.1	430	0.1	269	0.1								
Total Procurement Cost				0.8		0.1								1.0
METHOD OF IMPLEMENTATION Depot Field Application														
Contract Dates:			FY 1997: 31 Jan 97			ADMINISTRATIVE LEADTIME:			4 Months			PRODUCTION LEADTIME:		
Delivery Date:			FY 1997: 31 Jan 98			FY 1998: 31 Dec 97			31 Dec 98			FY 1999: 31 Dec 98		

Installation Schedule: Fire Suppression Change 1-94-03-0525													
FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		February 1997	
& Prior	1	2	3	4	1	2	3	4	1	2	3	4	
Inputs													
FY 1996 & Prior													
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior													
FY 1997													
FY 1998													
FY 1999													
</													

INDIVIDUAL MODIFICATION		Date	February 1997				
MODIFICATION TITLE:		Interim IPDS Launcher 1-94-03-0528					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		<p>A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Block IA, Army TACMS Missile System. The Block IA missile will be fielded in 1QFY98 and will require global positioning system (GPS) interface at time of launch. This modification must be accelerated because the pre-planned product improvement for GPS was not planned until the fielding of the Position Navigational Unit [POSNAV Unit (PNU)] with the Improved Fire Control System (IFCS) in FY00. The modification will incorporate the IPDS Line Replaceable Unit (LRU), a GPS antenna, associated cabling with armor protection, hoist bumper pads, a modification to the existing M68 Missile/Launch Pod Assembly (M/LPA) trainer, and sufficient Random Access Memory (RAM), with the Non Volatile Memory Module (NVMM) to support the software loaded into the IEU.</p>					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td style="text-align: center;"><u>PLANNED</u></td> <td style="text-align: center;"><u>ACCOMPLISHED</u></td> </tr> <tr> <td>Will be integrated into launchers as an interim program in support of ATACMS Block 1A.</td> <td></td> </tr> </table>		<u>PLANNED</u>	<u>ACCOMPLISHED</u>	Will be integrated into launchers as an interim program in support of ATACMS Block 1A.	
<u>PLANNED</u>	<u>ACCOMPLISHED</u>						
Will be integrated into launchers as an interim program in support of ATACMS Block 1A.							

INDIVIDUAL MODIFICATION															Date		February 1997							
MODIFICATION TITLE (Cont):															Interim IPDS Launcher 1-94-03-0528									
FINANCIAL PLAN: (\$ in Millions)																								
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RDT&E																								
PROCUREMENT																								
Kit Quantity																								
Installation Kits																								
Installation Kits Nonrecurring Equipment		29		16.2														29 16.2						
Equipment Nonrecurring																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																		1.7						
Other																		4.1						
Interim Contractor Support																								
Installation of Hardware																								
FY 1996 & Prior Eqpt -- Kits																								
FY 1997 Eqpt -- Kits																								
FY 1998 Eqpt -- Kits																								
FY 1999 Eqpt -- Kits																								
FY 2000 Eqpt -- kits																								
FY 2001 Eqpt -- kits																								
FY 2002 Eqpt -- kits																								
FY 2003 Eqpt -- kits																								
(FY (TC) Eqpt (xx kits)																								
Total Installation Cost																								
Total Procurement Cost		16.2		2.2		0.5		0.6		0.6		0.7		0.7				22.0						
METHOD OF IMPLEMENTATION Contract Field Integration															6 Months		12 Months		PRODUCTION LEADTIME:					
Contract Dates:															FY 1997:		FY 1998:		FY 1999:					
Delivery Date:															FY 1997:		FY 1998:		FY 1999:					

INDIVIDUAL MODIFICATION		Date				
MODIFICATION TITLE:	Interim MS Launcher 1-94-03-0529	February 1987				
MODELS OF SYSTEMS AFFECTED:	MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:	<p>A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Extended Range (ER) - MLRS beginning in 1QFY99. This modification is required to measure low altitude winds at the time of launch and will thus improve accuracy with increased range. This modification must be accelerated because the pre-planned product improvement for GPS was not planned for until the fielding of the Meteorological Sensor (MS) with the Improved Fire Control System (IFCS) in FY00. The components for this modification are the two IFCS MS Line Replaceable Units (LRUs), i.e., MET Sensor-Electronics Unit (MS-EU) and MS-Tranceiving Unit (MS-TU), associated kit components and sufficient Random Access Memory (RAM) to support the software loaded into the IEU. The current IEU P/N 13210269 will be modified to IEU P/N 13210255, with the Non Volatile Memory Module (NVMM).</p>					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:						
<table border="0"> <tr> <td style="text-align: center;">PLANNED</td> <td style="text-align: center;">ACCOMPLISHED</td> </tr> <tr> <td style="text-align: center;">Will be integrated into launchers as an interim program in support of ER-MLRS.</td> <td></td> </tr> </table>			PLANNED	ACCOMPLISHED	Will be integrated into launchers as an interim program in support of ER-MLRS.	
PLANNED	ACCOMPLISHED					
Will be integrated into launchers as an interim program in support of ER-MLRS.						

INDIVIDUAL MODIFICATION														Date		February 1997									
MODIFICATION TITLE (Cont):														Interim MS Launcher 1-94-03-0529											
FINANCIAL PLAN: (\$ in Millions)																									
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RDT&E																									
PROCUREMENT																									
Kit Quantity																									
Installation Kits																									
Installation Kits Nonrecurring																									
Equipment	10	9.9																	10	9.9					
Equipment Nonrecurring																									
Engineering Change Orders																									
Data																									
Training Equipment																									
Support Equipment*																									
Other																									
Interim Contractor Support				0.1		0.1		0.1		0.1		0.1		0.1		0.1				0.7					
Installation of Hardware																									
FY 1996 & Prior Eqpt -- Kits																									
FY 1997 Eqpt -- Kits																									
FY 1998 Eqpt -- Kits																									
FY 1999 Eqpt -- Kits																									
FY 2000 Eqpt -- kits																									
FY 2001 Eqpt -- kits																									
FY 2002 Eqpt -- kits																									
FY 2003 Eqpt -- kits																									
(FY(TC) Eqpt (xx kits)																									
Total Installation Cost																									
Total Procurement Cost		9.9		0.1		0.1		0.1		0.1		0.1		0.1		0.1				10.6					
* Support equipment for interim launcher pool upgrade.																									
METHOD OF IMPLEMENTATION Contract Field Integration														ADMINISTRATIVE LEADTIME:		6		Months		PRODUCTION LEADTIME:		14		Months	
Contract Dates:														FY 1997:		FY 1998:		FY 1999:		FY 1997:		FY 1999:			
Delivery Date:														FY 1997:		FY 1998:		FY 1999:		FY 1997:		FY 1999:			

INDIVIDUAL MODIFICATION		Date	February 1997				
MODIFICATION TITLE:		Hoist Carriage Assembly 1-95-03-0530					
MODELS OF SYSTEMS AFFECTED:		MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)					
DESCRIPTION / JUSTIFICATION:		<p>This modification provides a more reliable and stronger hoist carriage assembly, which will prevent cracks to the assembly and unnecessary bending of the "spider" beam. The modification will incorporate two Class I ECPs into 376 US Army M270 launchers and will standardize the fleet with one hoist carriage assembly common to the -202/-203 configuration M270 launcher. This modification will reduce Direct Support maintenance manhours and improve overall operational readiness.</p>					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		<table border="0"> <tr> <td>PLANNED</td> <td>ACCOMPLISHED</td> </tr> <tr> <td></td> <td>Development complete - Incorporated into current production.</td> </tr> </table>		PLANNED	ACCOMPLISHED		Development complete - Incorporated into current production.
PLANNED	ACCOMPLISHED						
	Development complete - Incorporated into current production.						

INDIVIDUAL MODIFICATION														February 1997											
Date																									
Hoist Carriage Assembly 1-95-03-0530																									
FINANCIAL PLAN: (\$ in Millions)																									
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL						
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
RDT&E																									
PROCUREMENT																									
Kit Quantity																									
Installation Kits																									
Installation Kits Nonrecurring																									
Equipment	376	3.3																	376	3.3					
Equipment Nonrecurring																									
Engineering Change Orders																									
Data																									
Training Equipment																									
Support Equipment																									
Other																									
Interim Contractor Support																									
Installation of Hardware																									
FY 1996 & Prior Eqpt - 376*	143	0.5	233	0.9															376	1.4					
FY 1997 Eqpt - Kits																									
FY 1998 Eqpt -- Kits																									
FY 1999 Eqpt -- Kits																									
FY 2000 Eqpt -- kits																									
FY 2001 Eqpt -- kits																									
FY 2002 Eqpt -- kits																									
FY 2003 Eqpt -- kits																									
(FY(TC) Eqpt (xx kits)																									
Total Installation Cost	143	0.5	233	0.9															376	1.4					
Total Procurement Cost		3.8		0.9																4.7					
METHOD OF IMPLEMENTATION Depot Field Application														ADMINISTRATIVE LEADTIME:		2		Months		PRODUCTION LEADTIME:		4		Months	
Contract Dates:														FY 1998:		FY 1999:		FY 1999:		FY 1999:		FY 1999:			
Delivery Date:														FY 1998:		FY 1998:		FY 1998:		FY 1998:		FY 1998:			

Installation Schedule: Hoist Carriage Assembly 1-95-03-0530																																					
FY 1996		FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
& Prior		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Inputs																																					
FY 1996 & Prior		65	75	105	93	38																															
FY 1997																																					
FY 1998																																					
FY 1999																																					
Outputs																																					
FY 1996 & Prior		12	53	99	125	87																															
FY 1997																																					
FY 1998																																					
FY 1999																																					
Inputs																																					
FY 2000		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
FY 2001																																					
FY 2002																																					
FY 2003																																					
Outputs																																					
FY 2000																																					
FY 2001																																					
FY 2002																																					
FY 2003																																					
Remarks:																																					
Total																																					
376																																					

INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE: Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obsc			
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)			
DESCRIPTION / JUSTIFICATION: <p>Technology obsolescence is dictating the replacement of many launcher components. A study performed showed by the year 2003 over 70% of the electronic components will be obsolete and will not be replaceable. Circuit Cards in the line replaceable units (LRUs) e.g., IEU and FCU, are already obsolete or rapidly approaching obsolescence. The funding on this program will procure modification kits which will incorporate improved components necessary to replace parts no longer available. Program Office support costs are included within this modification line. In addition, this modification will reestablish the MLRS baseline at the optimal configuration for integration of IFCS and ILMS (MC No. 0519 and 0526) by aiding in the calibration of the system, providing required accuracy levels for new and future munitions, increasing reliability of early configuration of the launcher which reduces O&S costs, and eliminating noise and multiple software requirements. Also, funding in FY 00 and FY 01 will be programmed for Army Technical Architecture Migration Phase I for communications software changes to meet the VCSA ATA Implementation</p>			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
PLANNED Will incorporate ongoing obsolescence analysis and determination into production.		ACCOMPLISHED	

INDIVIDUAL MODIFICATION														
Date February 1997														
MODIFICATION TITLE (Cont): Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obse														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits Nonrecurring														
Equipment	2.2	1.4	1.0	1.0	0.8	1.1	1.1	1.0						9.6
Equipment Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment*					0.2	0.2								0.4
Other														
Interim Contractor Support														
Installation of Hardware														
FY 1996 & Prior Eqpt -- Kits														
FY 1997 Eqpt -- Kits														
FY 1998 Eqpt -- Kits														
FY 1999 Eqpt -- Kits														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
(FY(TC) Eqpt (xx kits)														
Total Installation Cost														
Total Procurement Cost	2.2	1.4	1.0	1.0	1.0	1.3	1.1	1.0						10.0
* Support equipment funds show breakout of Phase I ATA requirement.														
METHOD OF IMPLEMENTATION														
Contract Dates:	FY 1997:	ADMINISTRATIVE LEADTIME:				PRODUCTION LEADTIME:				Months				
Delivery Date:	FY 1997:	FY 1998:				FY 1999:				FY 1999:				

BUDGET ITEM JUSTIFICATION SHEET									
APPROPRIATION / BUDGET ACTIVITY		DATE							
MISSILE PROCUREMENT / Spares and Repair Parts		February 1997							
		P-1 ITEM NOMENCLATURE							
		SPARES AND REPAIR PARTS (CA0250)							
		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY		0	0	0	0	0	0	0	0
COST (in millions)		11.5	12.1	11.3	21.4	22.0	31.6	38.8	43.6
Description: Provides for procurement of spares to support initial fielding of new or modified end items.									
Justification: The funds in this account procure depot level repairable (DLRs) secondary items from the Supply Management, Army business area of the Defense Business Operations Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:									
System			FY 1996	FY 1997	FY 1998	FY 1999			
Javelin									
MLRS		5.1			1.0			4.2	
ATACMS				1.0	1.0			7.1	
Patriot Mods		3.4		7.0	2.7			3.6	
Avenger Mods		1.0							
ITAS/TOW				2.3	5.7			5.8	
MLRS Mods		2.0		1.8	1.0			.6	
Totals		11.5	12.1	11.4	21.3				

BUDGET ITEM JUSTIFICATION SHEET							DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE						
MISSILE PROCUREMENT /Support Equipment and Facilities		AIR DEFENSE TARGETS (C93000)						
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.6	6.2	1.0	1.0	1.0	1.0	1.0	1.0
<p>DESCRIPTION:</p> <p>The Air Defense Targets Program provides fixed wing, rotary wing, ballistic and towed targets; target control systems; and ancillary equipment for worldwide active Army and Reserve Component air defense training, including quality assurance, lot acceptance, production qualification, and first article tests.</p> <p>During the budget years, targets to be procured include many different varieties, ranging from 1/9-scale training targets to realistic, full scale threats, as well as the Ballistic Aerial Target System (BATS). Towed targets to be procured include the Infrared (IR) Training Target. Target ancillary hardware includes items such as the target group set, scoring hardware and installation kits, scoring ground support equipment, IR augmenters, radar altimeters, and low altitude kit.</p> <p>JUSTIFICATION:</p> <p>In support of soldier training, targets are provided to support fielded AVENGER, MANPADS, AIR-TO-AIR STINGER, PATRIOT, Bradley STINGER Fighting Vehicle (BSFV) and LINEBACKER. Major items of target hardware which support or will support soldier training include MQM-107, Radio Controlled Miniature Aerial Target (RCMAT), Ballistic Aerial Target System (BATS), 1/5 Scale Remotely Piloted Vehicle Targets (RPVTS), towed training targets, target control systems and ancillary equipment. Training requirements are generated by DA major field commands and provided to TMO at an annual DA-sponsored targets conference. These field requirements have been scrubbed against HQDA fielding and force restructuring plans, and are consistent with approved training doctrine.</p> <p>In support of weapon systems testing, targets are provided on a reimbursable basis to STINGER, PATRIOT, U.S. Navy, U.S. Air Force, and other Army programs. Major items of target hardware which support or will support these tests include ancillary items, MQM-107, 1/5 Scale RPVTS, target control systems, drone control kits and BATS. To provide for sustained operations of target systems, it is necessary to establish operational pools which vary in size depending on quantity and frequency of flights which must be supported.</p>								

Missiles Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities						B. WEAPON AIR DEFENSE TARGETS (C93000)			C. MANUFACTURER NAME		D. DATE February 1997	
Missiles Cost Elements			FY96			FY97			FY98			FY99			
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	
MQM-107															
		-Airframe/Engine	1853			1912			665			664			
		-Technical Publications	780			727			333			332			
		-Engineering Costs													
		-Other Costs	2633			2639			998			996			
		SUBTOTAL													
RCMAT															
		-Hardware	52			50									
		-Operating Costs	22			19									
		-Other Costs	74			69									
		SUBTOTAL													
1/5 SCALE															
		-Hardware	176	112	2	618	150	4							
		-Operating Costs	60			120									
		-Other Costs	99			280									
		SUBTOTAL	335			1018									
BATS															
		-Airframes	874	157	VAR	425	7000	VAR							
		-Rocket Motors													
		-Other Hardware													
		-Operating Costs	109			55									
		-Other Costs	414			183									
		SUBTOTAL	1397			663									
TOWED TARGETS															
		-Operating Costs	77			54									
		-Other Costs	32			21									
		SUBTOTAL	109			75									
ANCILLARY/AUGMENTATION															
		-Hardware													
		- Piece Parts CIK-170 Scoring Kits													
		- GSQ-102 Scoring Ground Stations													
		- RCMAT CIK-206 Scoring Kits													
		- Universal Fins w/CDOPS													
		- CIK-228 Scoring Kits													
		- RCMAT CIK-206 Scoring Kits	909	500	2	881	470	2							
		-Operating Costs	532			375									
		-Other Costs	606			475									
		SUBTOTAL	2047			1731			998			996			
		GRAND TOTAL	6595			6195									

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)										DATE	February 1997
B. APPROPRIATION / BUDGET ACTIVITY										C. P-1 ITEM NOMENCLATURE	
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities										AIR DEFENSE TARGETS (C93000)	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST \$000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A	
1/5 SCALE											
FY96	Continental RPV, Barstow, CA	FP	MICOM	Oct-95	Jun-96	112	4	Yes			
FY97	Continental RPV, Barstow, CA	FP	MICOM	Oct-96	Feb-97	150	4	Yes			
BATS											
FY96	Lockley Mfg., New Castle, PA	FP	MICOM	Jan-96	Jan-97	157	VAR	Yes			
- Airframes											
- Other Hardware											
FY97	Lockley Mfg., New Castle, PA.	FP	MICOM	Oct-96	Jan-97	7000	VAR	Yes			
- Rocket Motors											
ANCILLARY/AUGMENTATION											
FY96	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-95	May-96	500	2	Yes			
- RCMAT CIK-206 Scoring Kits											
FY97	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-96	May-97	470	2	Yes			
- RCMAT CIK-206 Scoring Kits											
REMARKS:											

BUDGET ITEM JUSTIFICATION SHEET										DATE
P-1 ITEM NOMENCLATURE										February 1997
APPROPRIATION / BUDGET ACTIVITY										
MISSILE PROCUREMENT /Support Equipment and Facilities										ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0		0
COST (in millions)	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1		1.1

DESCRIPTION: Provides for procurement of various tools and shop sets to support the Army's missile systems worldwide.

JUSTIFICATION: Funding is required for procurement of tool and shop sets to support the following systems:

MLRS
TOW
AVENGER

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				B. WEAPON ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)				C. MANUFACTURER NAME ANNISTON DEPOT WAREHOUSE 30				D. DATE February 1997	
Missiles Cost Elements		FY 96		FY 97		FY 98		FY 99							
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each
ALL ARE MISSILE TOOL KITS. NO MODS															
1. MLRS COMPONENTS ASSEMBLY	A	402 215			487 260			467 250			469 251				
2. TOW COMPONENTS ASSEMBLY	A	65 35			16 8			16 8			14 6				
3. AVENGER COMPONENTS ASSEMBLY	A	165 89			142 78			140 73			132 69				
TOTAL		971			991			954			941				
NOTE: EACH SYSTEM HAS MORE THAN ONE KIT WITH VARYING QUANTITIES AND UNIT COSTS FOR EACH KIT.															

BUDGET ITEM JUSTIFICATION SHEET										DATE	February 1997
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE								MISSILE DEMILITARIZATION (HL2000)	
MISSILE PROCUREMENT / Support Equipment and Facilities		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY		0	0	0	0	0	0	0	0		
COST (in millions)		1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5		

Description: The Missile Demilitarization Program provides for the demilitarization of U.S. Army missiles and missile components that are obsolete or excess to the Army requirements following the guidelines of the Resource Conservation and Recovery Act.

Justification: The backlog of missiles requiring demilitarization is a growing concern of the Department of the Army. Changes during the past few years in the worldwide political environment have resulted in drastic changes in military strategies. Reduced requirements of prepositioned military forces, retrograde of weapon system assets from Europe and major changes in war reserve planning have placed a tremendous strain on the CONUS wholesale storage base. There are some 52,000 missiles and 100,000 missile components utilizing 99 premium storage igloos that require demilitarization. FY98 will continue the process of demilitarization priority one (obsolete, excess, environmental concern and using valuable storage space) missiles, i.e., Shillelagh.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				B. WEAPON MISSILE DEMILITARIZATION (HL2000)		C. MANUFACTURER NAME N/A		D. DATE February 1997	
Missiles Cost Elements		FY 96		FY 97		FY 98		FY 99			
ID	CD	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000
SHILLELAGH											
DEMILITARIZATION		1116			1149			1183			1219
OTHER		255			252			249			194
REDEYE											
DEMILITARIZATION		125									
OTHER		20									
SS-11(M22)											
DEMILITARIZATION		102			107			60			69
OTHER		25			24			15			14
NIKE HERCULES											
DEMILITARIZATION											
OTHER											
TOTAL		1643			1532			1507			1496

BUDGET ITEM JUSTIFICATION SHEET										DATE
APPROPRIATION / BUDGET ACTIVITY										February 1997
MISSILE PROCUREMENT /Support Equipment and Facilities					P-1 ITEM NOMENCLATURE					PRODUCTION BASE SUPPORT (CA0100)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003		
QUANTITY	0	0	0	0	0	0	0	0		
COST (in millions)	2.8	3.5	3.4	3.3	3.6	3.6	3.9	3.9		
<p>DESCRIPTION: This program provides for Production Support and Equipment Replacement (PSR) of Government owned equipment used in production and production testing of missile systems or missile components. Funds are used to establish, modernize, expand or replace Army-owned industrial facilities.</p> <p>JUSTIFICATION: The FY98/FY99 request includes the above routine maintenance on real property, replacement/rehabilitation of existing equipment or instrumentation and modernization of test facilities at the Redstone Arsenal Technical Test Center and White Sands Missile Range. This project is also essential in sustaining the Army's missile warhead production capability, eliminating safety hazards, etc., at the Iowa Army AMMO Plant.</p> <p>A detailed summary project listing is attached.</p>										

Production Support and Facilities Projects			DATE		February 1997	
APPROPRIATION / BUDGET ACTIVITY			P-1 ITEM NOMENCLATURE			
MISSILE PROCUREMENT /Support Equipment and Facilities			PRODUCTION BASE SUPPORT (CA0100)			
PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
39X2169	PSR	Redstone Arsenal Rocket Engine (RARE) Facility				
		Thiokol Corp, producers of Solid Rocket Motors, closed its Redstone facility in September 1996. Due to the Thiokol's mission, an Environmental Baseline Study (EBS) has been performed to assess and establish liability for contamination. Funds will be used to complete environmental studies, demolition/asbestos abatement or other documentation related to closure of RARE that is required by environmental laws or that which is in the best interest of the government.	1.316	1.947	1.814	1.775
93X5069	PSR	White Sands Missile Range	0.800	1.095	1.000	1.000
		Funds replacement and initial purchase of equipment and instrumentation used in production testing of missile systems and components. Supported systems include ATACMS, MLRS, PATRIOT, SADARM.				
		This project will procure computer system upgrades, replace test equipment and provide communications security equipment.				
93X5071	PSR	Redstone Arsenal Technical Test Center (RTTC)	0.200	0.224	0.250	0.250
		This equipment is required for modernization of test facilities and equipment in the Dynamic, Static, and Electronic Component Test Branches of the Redstone Technical Test Center.				

Production Support and Facilities Projects				DATE
APPROPRIATION / BUDGET ACTIVITY		P-1 ITEM NOMENCLATURE		February 1997
MISSILE PROCUREMENT /Support Equipment and Facilities		PRODUCTION BASE SUPPORT (CA0100)		
PROJECT NO.	TYPE	NAME /LOCATION	FY 1996	FY 1997
3902335	MISSILE AUTOMATIC TEST EQUIPMENT (MATE)			FY 1998
Annual project to maintain and upgrade Missile Automatic Test Equipment used in depot level maintenance of various missile systems.		0.383		FY 1992
6935333	PSR, IOWA ARMY AMMO PLANT			
This project is essential to sustain the Army's missile warhead production capability, eliminate safety hazards by replacing worn equipment and rehabilitation of facilities. Further, this project will improve the Heating Ventilation and Air Conditioning (HVAC) in the TOW production area, provide fire protection in Bldg I-40 assembly area and upgrade process controllers in various areas.		0.149	0.200	0.300